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ENVIRONMENTAL ASSESSMENT BOARD

VOLUME: 261

DATE: Thursday, November 15, 1990

BEFORE:

A. KOVEN

Chairman

E. MARTEL

Member


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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental
Assessment for Timber Management on Crown
Lands in Ontario;

- and -

IN THE MATTER of an Order-in-Council
(O.C. 2449/87) authorizing the
Environmental Assessment Board to
administer a funding program, in
connection with the environmental
assessment hearing with respect to the
Timber Management Class
Environmental Assessment, and to
distribute funds to qualified
participants.

Hearing held at the offices of the Ontario
Highway Transport Board, Britannica Building,
151 Bloor Street West, 10th Floor, Toronto,
Ontario, on Thursday, November 15th, 1990,
commencing at 9:30 a.m.

VOLUME 261

BEFORE:

MRS. ANNE KOVEN
MR. ELIE MARTEL

Chairman
Member

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I N D E X O F P R O C E E D I N G S

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1559A	Duplication of Exhibit 1559 depicting the area of the three-coupe system and the two-coupe system.	47032
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<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
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<u>Exhibit No.</u>	<u>Description</u>	<u>Page No</u>
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1572	Thirty-three page document entitled Forestry Canada, Ontario Region, Upland Black Spruce Directed Seeding Studies, Thunder Bay district, by Flemming and Mause.	47180

1 ---Upon commencing at 9:30 a.m.

2 MADAM CHAIR: Good morning. Please be
3 seated.

4 For the record, the Board won't be
5 sitting next Tuesday, November the 20th.

6 Ms. Cronk?

7 MS. CRONK: Good morning, Madam Chair,
8 Mr. Martel, Mr. Marek.

9 Madam Chair, we took advantage of the
10 late start to provide to our friends and to you and to
11 Mr. Martel the balance of the documents that we will be
12 referring to in cross-examination ,and I understand
13 that Mr. Pascoe has put them in your books for you,
14 they are tabs 32 and following. There's a revised
15 index there for you and Mr. Marek has been given a copy
16 of the tabs, as have the balance of the counsel in the
17 room.

18 There's a column there for the exhibit
19 number, but I confess that at the hour last evening we
20 didn't have a chance to fill the ones to date in, but
21 we'd be glad to do that for you at some time.

22 MADAM CHAIR: That's helpful. Thank you,
23 Ms. Cronk.

24 MS. CRONK: You're welcome.

25 GEORGE MAREK, Resumed

1 CONTINUED CROSS-EXAMINATION BY MS. CRONK:

2 Q. Mr. Marek, when we broke yesterday
3 afternoon you'll recall we had been discussing a number
4 of issues that arose during the course of your slide
5 presentation to the Board -- I'm sorry, you're waving a
6 piece of paper; what is it?

7 A. As I remember correctly last --
8 yesterday, I would like to supplement the pages in the
9 letters...

10 Q. You're talking about the letters that
11 you filed yesterday?

12 A. Yeah. i think they should be done
13 probably now.

14 Q. That's fine.

15 MS. CRONK: A problem arose, Mrs. Koven,
16 in respect of the letter under the signature of Mr.
17 Saltarelli that Mr. Marek was good enough to produce in
18 response to an undertaking.

19 Page 2 as produced to you, and the copy
20 given to you by Mr. Marek, clearly did not follow the
21 language from the bottom of page 1 on the photostat and
22 looks like inadvertently the wrong page 2 had been
23 attached so I spoke with Ms. Swenarchuk and she was
24 good enough to make further enquiries and find the
25 proper page 2 and I take it that's what you now have.

1 MADAM CHAIR: Thank you. This is for
2 Exhibit 1547A, and so we will just insert the proper
3 page.

4 MS. CRONK: Do you have copies of it
5 there, Mr. Marek?

6 MR. MARTEL: I have copies. (handed)

7 MADAM CHAIR: Thank you, Mr. Marek.

8 THE WITNESS: May I have a copy too,
9 please, just in case.

10 MS. CRONK: Q. Mr. Marek, yesterday we
11 were discussing a number of issues that arose as a
12 result of your slide presentation to the Board and as a
13 result of your written evidence. One of those issues
14 that we did not discuss yesterday relates to the matter
15 of site nutrient capital and your evidence to the Board
16 regarding site nutrient depletions.

17 You may remember that, as no doubt you
18 do, that you showed the Board a number of slides
19 dealing with this issue; do you recall? There were a
20 number of slides in which you made comments about
21 nutrient capital on the site and nutrient depletions.

22 A. Well, you cannot picture these things
23 on the slide, you have to talk about it and perhaps
24 that's what you mean.

25 Q. That's what I mean.

1 A. Yeah. Okay, okay.

2 Q. There is also a discussion in your
3 written evidence about this matter and I would ask you
4 to go to page 18 of your Panel 3 evidence.

5 A. Yes, I have it.

6 Q. Now, there's a number of pages
7 devoted in part or in whole to this topic in the Panel
8 3 statement of evidence, but I direct your attention by
9 way of illustration to the first two sentences of the
10 paragraph entitled: Reproductive Ability of Black
11 Spruce, Section 5.1, on page 18. Right at the top on
12 page 18, Mr. Marek.

13 A. Correct, yeah, Reproductive Ability
14 of Black Spruce.

15 Q. Yes. And the first two sentences
16 indicate:

17 "The regeneration of black spruce is
18 dependent on moderate rather than extreme
19 conditions of the environment, wild fire
20 may be cataclysmic at its outset but
21 moderate conditions are present very
22 shortly after. Establishment in early
23 growth are enhanced by atmospheric inputs
24 of moisture and nutrients."

25 I take it that's your opinion?

1 A. That's correct.

2 Q. And could I ask you to go, if you
3 would please, to page Roman numeral (v) in the
4 executive summary at the front of this statement of
5 evidence.

6 A. That's on page what?

7 Q. It's Roman numeral (v).

8 A. (v), okay.

9 Q. Paragraph 12, part of the executive
10 summary. Do you have that?

11 A. Yeah, that's right, page 28, yeah.

12 Q. Yes, at the top there's a brief
13 citation, that's right. And paragraph 12 reads in part
14 as follows:

15 "Studies of regeneration on cut-overs in
16 the Nipigon District have indicated
17 nutrient losses from harvest and the
18 full-tree logging technique gives cause
19 for concern regarding regeneration and
20 long-term productivity on some sites."

21 A. That's right.

22 Q. And what you're suggesting there, as
23 I understand your evidence, is that in the Nipigon
24 District you have a concern about nutrient losses
25 caused by harvesting?

1 A. That's correct.

2 Q. All right. Now, could I ask you to
3 go, if you would please, to the black binder of
4 documents. Have the additional documents been put in
5 that binder for you, Mr. Marek?

6 A. I have it here.

7 Q. They haven't been put in for you?

8 A. I don't think it's important if it's
9 in or out. I will take care of it.

10 Q. Could you go to Tab 21, if you would,
11 please.

12 A. 21. Okay, 21.

13 Q. You will recall that at Tab 21 is an
14 article by Foster and Morrison--

15 A. That's right.

16 Q. --which was the fourth article in the
17 series--

18 A. Mm-hmm.

19 Q. --of studies relating to the strip
20 cutting project in the Lake Nipigon FMA.

21 A. That is correct.

22 Q. All right. And the subject matter of
23 this particular article, which is Exhibit 1552, is
24 Projected Nutrient Removals Associated with Harvesting.
25 Do you see that in the title?

1 A. That's right.

2 Q. All right. So this study, as I
3 understand it, deals expressly with the potential for
4 nutrient depletions and consequences of various
5 harvesting techniques?

6 A. That's correct.

7 Q. Could I ask you to look, if you would
8 please, to perhaps look first at page 453 of the
9 article.

10 A. 453, yeah.

11 Q. Yes. Under the discussion section in
12 the left-hand column.

13 A. Vegetation, Nutrient Content.

14 Q. Yes. You'll see in the first
15 sentence at the beginning of that discussion it
16 indicates:

17 "The results from this study apply only
18 to a limited but very representative area
19 of shallow...", am I going to pronounce
20 the next word --

21 A. Podzolic.

22 Q. Thank you.

23 "...podzolic soils supporting upland
24 black spruce near Nipigon, Ontario
25 because nutrient accumulation is site and

1 species specific."

2 Now, stopping there for a moment, do you
3 agree, Mr. Marek, that nutrient accumulation is site
4 and species specific?

5 A. Very much so.

6 Q. Am I correct that it appears that
7 this study specifically addressed shallow soiled sites
8 in the Nipigon District?

9 A. Being fully aware of Mr. Morrison's
10 studies, I will disagree with him that this study has
11 been done only on shallow sites.

12 Q. All right. Well, whether it was done
13 only or--

14 A. Partially.

15 Q. --or exclusively, it studied shallow
16 soiled sites in the Nipigon District?

17 A. That's right.

18 Q. Thank you. And am I correct that in
19 general terms what the study results suggest as
20 reported by the authors is that there was more nutrient
21 removal, including nitrogen removal, associated with
22 full-tree harvesting than conventional harvesting
23 methods?

24 A. That's correct.

25 Q. And the study results, as reported by

1 the authors, also suggested that the margin of
2 difference in terms of nutrient removals, including
3 nitrogen removal, between whole-tree harvesting and
4 full-tree harvesting was marginal?

5 A. The opinion stated as the study
6 points out.

7 Q. Yes. They sort of go up a ladder,
8 and what they were suggesting is that with conventional
9 harvesting you get one level of depletion--

10 A. That's right, there are several
11 levels of --

12 Q. --it's more with full-tree
13 harvesting, but not much more with whole-tree. That's
14 basically what the study said?

15 A. Yeah.

16 Q. All right. Could I ask you to --

17 MS. SWENARCHUK: Are we going to use the
18 term full-tree or whole-tree here, because whole-tree
19 in part of the literature means the same as full-tree
20 in another part.

21 MS. CRONK: Well, I'm using the terms of
22 the authors.

23 Q. Can I ask you to go to page 463 and
24 perhaps we can clarify this. Page 463.

25 A. 463?

1 Q. Sorry, page 453.

2 A. Okay, okay.

3 Q. Where we were under Vegetation,

4 Nutrient Content.

5 A. Yeah.

6 Q. About halfway down that paragraph you
7 see where it refers to Table 3 in brackets, halfway
8 down the page?

9 A. Table 3, yeah.

10 Q. Yes. And the following sentence
11 reads as follows:

12 "The removal of nutrient rich foliage and
13 branches, however, would contribute to a
14 much greater loss of N...", I take that
15 to be nitrogen?

16 A. No.

17 Q. N refers to nitrogen?

18 A. Foliage contains all kind of
19 nutrients, Madam, not only nitrogen.

20 Q. I understand that, but when they use
21 the initial N, they are referring to nitrogen?

22 A. N, nitrogen, that's right, N, P, K
23 here.

24 Q. Thank you.

25 "The removal of nutrient rich foliage and

1 branches, however, would contribute to a
2 much greater loss of nitrogen and to a
3 lesser extent potassium and magnesium..."

4 A. That's right.

5 Q. "...with full-tree harvesting where
6 the entire above ground portion is
7 removed than with conventional practice.
8 For example, full-tree logging would
9 remove approximately 172 kilograms more
10 nitrogen per hectare on this site than
11 with conventional harvesting."

12 A. That's the statement, yeah.

13 Q. That's the first part. I said
14 potassium, it's phosphorus. P is phosphorus. That's
15 my medical...

16 A. That's right.

17 Q. And then continuing on:

18 "The additional removal of nutrients
19 associated with extracting and removing
20 the stump and roots along the above
21 ground component, often referred to as
22 whole-tree as opposed to full-tree
23 harvesting, would be small."

24 A. Right.

25 Q. So stopping there, that was just the

1 ladder I was describing to you that they found?

2 A. Yeah, that's right.

3 Q. And can I ask you to go to the next
4 page, if you would please, page 454.

5 A. Correct.

6 Q. Do you see the section entitled
7 Nutrient Replenishment in the right-hand column?

8 A. Yeah.

9 Q. All right. So the authors have
10 discussed first the effect of various harvesting
11 methods on nutrient depletion and now they're
12 discussing nutrient replenishment?

13 A. Yeah.

14 Q. All right. I direct your attention
15 to the last paragraph in the right-hand column under
16 nutrient replenishment which reads as follows:

17 "Nutrients removed in harvesting can be
18 replaced if atmospheric and weathering
19 inputs exceed the nutrient loss
20 associated with harvesting and
21 leaching from the soil."

22 That's the first sentence.

23 A. Mm-hmm.

24 Q. And then they go on to explain
25 various calculations that they found in results they

1 measured in their study, and they conclude in the last
2 sentence:

3 "Weathering and precipitation inputs
4 together are greater than an annual
5 prorated projected nutrient loss that is
6 due to full-tree harvesting and this
7 suggests that nutrient losses are
8 replaceable."

9 And stopping there, Mr. Marek. That
10 finding by the authors suggest; does it not, that
11 nutrients removed during full-tree harvesting are
12 replaced on an annual basis by various inputs?

13 A. This is a statement by author which I
14 could question.

15 Q. You disagree with it?

16 A. No, I don't disagree that this
17 happen. What seems to me that what is not elaborated
18 is nutrient conservation and that means that nutrient
19 conservation for black spruce, which is very shallow
20 rooted specie, is very important and it's not
21 considered in this.

22 There should have been actually, Madam,
23 continuation of this biome study which has been done in
24 Nipigon District. Unfortunately it didn't happen; in
25 other words, the project was cancelled, so we couldn't

1 investigate that very important aspect of nutrient
2 conservation, distribution and so on.

3 Q. I'm grateful for that. Just dealing
4 with the issue, however, of depletions and replacement
5 or replenishment, these authors found in their study
6 area which included, you told me, shallow soiled sites
7 in the Nipigon District.

8 A. Not only shallow sites, but also
9 other sites.

10 Q. Which included shallow soiled sites
11 in Nipigon District?

12 A. Which included. That's very
13 important, very important, Madam.

14 Q. Yes, which included those types of
15 sites, they found on an annual basis the nutrient
16 losses caused by full-tree harvesting were replaceable.

17 A. Yeah. May I just clarify the Board
18 on this. This nutrient conservation is very important
19 for black spruce because, as I suggested in my slides,
20 it's a very shallow rooting specie where this
21 conservation factor is very ipmortant factor in
22 nutrient cycling.

23 The other thing is, while this report
24 states that only shallow sites were investigated, may I
25 point out to you, Madam and to Madam Chair there, that

1 many of these studies which were done were done in
2 situ; in other words, they were done one or two years,
3 documented and then abandoned.

4 That is something which I object to
5 strongly because these studies should continue in order
6 to see the follow-up happenings and the follow-up
7 results of these nutrient cycling processes which are
8 affected by many factors.

9 Q. Could I ask you now, Mr. Marek, if
10 you would please, to go to page 455 for a continuation
11 of the discussion by the authors.

12 A. That's right.

13 MADAM CHAIR: Excuse me. Mr. Marek, do
14 you know of any studies ongoing now with respect to the
15 question of nutrient input and losses?

16 THE WITNESS: And the manipulation of
17 nutrient by the events of further interferences?

18 MADAM CHAIR: Yes.

19 THE WITNESS: This is what we try to get
20 going. I don't know of any right now. I discuss this
21 with many scientists, they feel it's a very important
22 issue which has been discovered by the -- discovery of
23 this whole process in ecosystem, and we are at the
24 beginning just to realize some of the implications.

25 No, there are none.

1 MADAM CHAIR: You don't know of any
2 individual studies?

3 THE WITNESS: Not --

4 MADAM CHAIR: One of the Ministry of
5 Natural Resources terms and conditions is to
6 investigate this more fully.

7 THE WITNESS: Exactly.

8 MADAM CHAIR: But we wanted to know if
9 there is, at this date, any --

10 THE WITNESS: There are some advanced
11 study in this field in the United States and in Europe,
12 but not in boreal forest.

13 MS. CRONK: Q. My understanding is that
14 this is the most recent current study--

15 A. That's right.

16 Q. --dealing with this issue.

17 A. That's right.

18 Q. Could I ask you to go to page 455
19 then. Do you have that, Mr. Marek?

20 A. That's right.

21 Q. And I would ask you to look, if you
22 would please, at the left-hand column where the authors
23 are talking about nitrogen cycling.

24 A. That's right.

25 Q. And I draw your attention, please, to

1 the third full paragraph.

2 A. Mm-hmm.

3 Q. To the last sentence and the
4 discussion that follows. The last sentence of the
5 third full paragraph reads:

6 "The consequences of nitrogen removal,
7 even with full-tree harvesting, may not
8 be severe since removals are modest in
9 relation to total soil nitrogen reserves
10 and their potential turnover on this
11 site."

12 They suggest - just dealing with that for
13 the moment - they suggest; do they not, that obviously
14 while nitrogen removal potential is important and
15 should be looked at, the consequences may not be severe
16 on the site they were discussing?

17 A. May not be. Point out, may not be.

18 Q. Yes.

19 A. Right.

20 Q. Then continuing on in the next
21 paragraph the authors indicate:

22 "Weetman and Webber's 1972 contention
23 that nutrient losses associated with
24 full-tree harvesting of black spruce
25 forest are unlikely to result in any

1 additional nutrient limitations
2 developing in acid tills of the
3 Canadian Shield during a second rotation
4 is supported by our results."

5 Do you see that?

6 A. Yes, I do. I like to qualify Mr.
7 Weetman's statement here.

8 Q. Well, Mr. Weetman isn't speaking
9 here.

10 A. I'm speaking for him for farther
11 investigation of this problem.

12 Q. Well, all right. Rather than
13 speaking for him, could we just for the moment direct
14 our attention to this and then I'll invite your
15 comment, if you have one.

16 A. Okay.

17 Q. First of all let's be clear. What
18 the authors are saying is that their work supported the
19 previous work of Weetman; correct?

20 A. Correct.

21 Q. And that previous work suggested that
22 nutrient losses from full-tree harvesting of black
23 spruce was unlikely to result in incremental nutrient
24 losses?

25 A. Where it stated in report.

1 Q. All right. Then in fairness the
2 authors go on and indicate:

3 "Weetman and Webber and Gordon and
4 Timmer...", of course that's the work
5 you've referred the Board to.

6 A. Mm-hmm.

7 Q. "...have cautioned that some
8 infertile or shallow soils may contain
9 insufficient..."

10 A. Nutrient capital.

11 Q. "...phosphorus...", I'm stuck on
12 that, I'm still thinking potassium,

13 "...nutrient capital to sustain a fully
14 productive second rotation forest after
15 full-tree logging."

16 So we have this division of suggestion in
17 the research that they're identifying. And then they
18 go on to say:

19 "These studies document the large site to
20 site variability in nutrient reserves."

21 A. Correct.

22 Q. Do you agree with that, that there is
23 a large site to site variability in nutrient reserves?

24 A. That is correct, very much so.

25 Q. And then they continue on in the top

1 paragraph in the right-hand column to indicate:

2 "This, together with the high degree of
3 uncertainty in quantifying site nutrient
4 reserves, demonstrate the difficulties
5 of trying to generalize about potential
6 impacts of harvesting on the nutrition of
7 future rotations of spruce forests."

8 A. Exactly.

9 Q. Do you agree, Mr. Marek, that it is
10 difficult and perhaps inappropriate to try to
11 generalize about the kind of potential impacts to
12 nutrient capital that could be occasioned by various
13 harvesting methods; you have to be very cautious in
14 doing that?

15 A. Yes. Yes, okay.

16 Q. You agree?

17 A. (nodding affirmatively)

18 Q. It's important to remember that there
19 is this site to site variability in nutrient capital
20 conditions?

21 A. That's right.

22 Q. And also with respect to nutrient
23 accumulation?

24 A. Not nutrient accumulation, and may I
25 now state my case?

1 Q. Sorry, I thought that's what you
2 agreed with before when the authors suggested --

3 A. According to them it's accumulation.
4 It's nutrient distribution and cycling and
5 mineralization and whatever process.

6 Q. I see, I see. And you agree that
7 that's variable from site to site?

8 A. That's right.

9 Q. And that it's important to remember
10 that when we're making observations or discussing the
11 issue--

12 A. Yes.

13 Q. --of nutrient losses?

14 A. Yes.

15 Q. Thank you very much. In the end, Mr.
16 Marek, would you agree that what this study suggests -
17 it being the most current available with respect to
18 this, the boreal forest and this portion of the boreal
19 forest specifically - that while nutrient losses are
20 clearly a relevant issue and must be addressed, that
21 the problem may not be as severe as some prior research
22 is suggesting?

23 A. No, I don't agree with that.

24 Q. Do you agree that that's what these
25 authors suggest?

1 A. Oh yeah, I agree with that, yes, yes.

2 Q. But in your opinion that's not --

3 A. In the findings, new observation and
4 new documentation is being undertaken now, and I would
5 like to indicate Dr. Weetman here and others who are
6 looking now for complicated processes which may reverse
7 some of the observation or study before.

8 Q. Sorry, what new documentation are you
9 referring to?

10 A. I think it's a very nice
11 documentation on competition. Competition interfere
12 with many of these processes described here. In other
13 words -- Madam Chair, may I explain in detail?

14 When I had Dr. Weetman with me last
15 summer for 10 days examining some of these problems, he
16 came up on my suggestion, he say --

17 MADAM CHAIR: Excuse me. Remind the
18 Board where Dr. Weetman is from?

19 THE WITNESS: Dr. Weetman is from
20 University of British Columbia who work on black spruce
21 for many years in Quebec so he's familiar and his
22 scientific documentation is stated in the evidence
23 here.

24 MADAM CHAIR: Yes.

25 THE WITNESS: They are looking now at the

1 problem of competition, they call it lesser
2 competition, which may be represented in our boreal
3 forest by species, herbaceous species, ericaceous
4 species like ledum, camadaphne and many others.

5 These plants now are getting into the
6 system by their occupation of the sites; in other
7 words, where previously you didn't have these species,
8 they move in after clearcutting and they competing
9 directly for the nutrients which are described in this
10 thing. It's a new science, it's a science which has to
11 be pursued in order to really find out the
12 effectiveness of nutrient accumulation or nutrient
13 cycling.

14 In other words, because you have
15 nutrients, that doesn't mean that nutrients are
16 available to the tree, that may be available to
17 something else or are in such a condition that are not
18 mineralized and still inorganic which is not accessible
19 to the trees.

20 So having nitrogen in the floor or
21 phosphorus or biome does not mean that that stuff is
22 available to the trees, especially in black spruce case
23 where you have a very shallow root system which
24 completely and entirely depends on this mineralization
25 processes and availability of these nutrients to the

1 tree. They may be available some competing vegetation
2 but are not available for primary specie. I think that
3 came clear also through my slide presentation, Madam.

4 MS. CRONK: Q. All right. So what
5 you're saying, if I understand it, Mr. Marek, is that
6 it is important to look as well at the impact of
7 competition on various sites on the nutrient capital
8 base?

9 A. Exactly, Madam.

10 Q. All right. But looking just at the
11 issue for the moment of the impact of harvesting as a
12 timber management technique on nutrient capital, you
13 would agree that the result of this study suggests that
14 while the issue is important and must continue to be
15 looked at, the results may not be so severe as
16 suggested by prior research?

17 A. Again, that last sentence doesn't fit
18 in with what I try to convey here, Madam. If you
19 create condition for competition to move in and take
20 over the site, then you have a completely different
21 situation.

22 Q. Are you aware, Mr. Marek - just so
23 that I'm clear - are you aware of any additional
24 documentation post-dating this study dealing with the
25 impacts of harvesting on nutrient depletion in the

1 boreal forest, and with or without the effect of this
2 competition emergence that you're discussing?

3 A. The competition play very important
4 part because that is the site condition you find after
5 clearcutting or any disturbance for that matter,
6 doesn't make any difference.

7 Q. I understand the evidence you've
8 given, my question is this, sir: Are you aware of any
9 more recent documentation dealing with that aspect of
10 the issue and the impact of harvesting on nutrient
11 depletions than this article?

12 A. Not right now, no, officially so I
13 can present to you, otherwise I would have done it.

14 Q. Thank you very much. All right.
15 Now, Mr. Marek, could I ask you to look at Exhibit
16 1537, please, that large map that you were good enough
17 to identify various matters on the other day.

18 And could you refresh the Board's memory,
19 please, as to the location of your slides 101 and 102
20 in Vincent Township?

21 A. That's in here.

22 Q. All right. You're pointing to an
23 area inbetween Beardmore and Thimble Lake on the map?

24 A. In this here, around here.

25 Q. Now, as I recall your evidence, the

1 area depicted in those two slides depicted the area of
2 some of the strip cutting work that you conducted that
3 you described to the Board?

4 A. 1967.

5 Q. All right. Mr. Marek, I'm going to
6 show to you - and the Board may find it useful to turn
7 these up - a copy of photographs 101 and 102, because
8 I'm going to ask you some questions about this.

9 A. I'm aware of these photographs,
10 Madam.

11 Q. I would like you to have it just in
12 case you need it; if you don't need it, that's fine,
13 but there you are. There's 101, 102. (handed)

14 A. Thank you.

15 Q. Now, Mr. Marek, could I ask you to
16 go, if you would please, to Tab 39 of the black binder.

17 A. Area showing on FRI map?

18 Q. Yes.

19 A. Is that it?

20 Q. Yes. Now, I'm going to show you a
21 coloured version of this map for the moment in an
22 effort to make it as easy as possible.

23 My understanding is that this map is an
24 extract from the relevant FRI map showing the location
25 and the direction of your photographs and your slides

1 101 and 102; is that correct?

2 A. Yeah, that's the same thing as here
3 only thing this is green.

4 Q. We coloured it just so it might be
5 clearer in case there was any difficulty reading the
6 photocopy.

7 A. Well, this is black and this is
8 green.

9 Q. Well, one's a photocopy and one's an
10 original.

11 A. Okay.

12 Q. Thank you.

13 MS. CRONK: It may be helpful to the
14 Board, Madam Chair, to have the original version.

15 MADAM CHAIR: All right, thank you, Ms.
16 Cronk. Do you want this to be an exhibit?

17 MS. CRONK: Yes, please. (handed)

18 MADAM CHAIR: Exhibit 1559. Could you
19 describe it, please?

20 MS. CRONK: Yes, Madam Chair. It's an
21 extract from the FRI map for Lake Nipigon District
22 depicting the area of Mr. Marek's slides 101 and 102.

23 ---EXHIBIT NO. 1559: Extract from FRI map for Lake
24 Nipigon District depicting area
25 of Mr. Marek's slides 101 and
102.

1 MS. CRONK: And I'm sorry, Madam Chair, I
2 missed that exhibit number.

3 MADAM CHAIR: 1559.

4 MS. CRONK: Thank you.

5 Q. All right. Does the map, Mr. Marek,
6 accurately show the vantage point from which the slides
7 were taken; in other words, if we look at the map do we
8 see where your slides were?

9 A. Well, you can show it -- if you don't
10 mind perhaps we can show the slides on the...

11 Q. We can, but for the moment, just so
12 that we're sure that I'm looking at the right thing,
13 does it accurately show where they were?

14 A. That's right.

15 Q. Now, it was your evidence, as I
16 understood it, with respect to these strip cuts that
17 the area was divided into three different parts and it
18 was consecutively or progressively harvested in the
19 three-coupe system. Do you recall giving that
20 evidence?

21 A. Well, here we comes to the problem,
22 Madam, because this map -- FRI map identify the total
23 treatment, cutting in the entity; in other words, it
24 show the total area which was interfered with or in
25 cases it was cut in two or three or four years.

1 So we are talking about project 1,
2 project 2 or project 3 and I had great difficulties
3 last night to identify this and some of the treatments
4 with it and the results, assessment results is what you
5 see in front of you. I believe me, I was getting quite
6 a headache with last night because I was trying to
7 read --

8 Q. I wouldn't do that.

9 A. Well, you are the second one. Mr.
10 Hanna was the first one, you are the second one.

11 Q. At least I'm in good company, Mr.
12 Marek.

13 A. You are, you are in excellent
14 company.

15 Q. Could we address the question that I
16 put to you first and then --

17 A. That's right. Well, it does not
18 because this is a total area which was treated on many
19 occasions in this sequence of years.

20 Q. I'm talking about the evidence that
21 you gave to the Board, sir, and let me just rephrase
22 the question.

23 A. Yeah.

24 Q. Perhaps you didn't hear it clearly.

25 A. All right.

1 Q. My suggestion to you was that in
2 describing to the Board the work that you have done and
3 that is depicted in slides 101 and 102, you told the
4 Board - and I can show you the transcript--

5 A. Mm-hmm.

6 Q. --that it was divided into three
7 different parts and consecutively or progressively
8 harvested in three coupes. Now, is that correct?

9 A. No.

10 Q. I see.

11 A. I said part of it was.

12 Q. Part of the entire area?

13 A. Part of the entire area.

14 Q. All right. Well, on the FRI map that
15 you have, we've got the location of the two slides.
16 Let's deal with slide 101. As I understand it, that's
17 the area that was intended for a three-coupe system and
18 a progressive cut method?

19 A. No.

20 Q. No, I see.

21 A. No, no.

22 Q. I see. Well then, help me, what was
23 intended with respect to the slide 101 area?

24 A. The first part -- Madam Chair, may I
25 point out that I visit this area regularly every year,

1 sometimes two or three times, because I keep my certain
2 plots and observation datas here, so let's point out
3 that this first part here, up to here, that was a
4 three-coupe system or three...

5 Q. I see.

6 A. The other area here was a two-coupe
7 system.

8 Q. I see.

9 A. So one represents -- and again, I
10 should have the others, other thing where I can
11 pinpoint exactly where the first treatment was done in
12 1967 and the other one done later on in 1974 and I had
13 a --

14 Q. All right. Could you just draw on in
15 red, please, on this copy of the exhibit where the
16 three-coupe system applied, approximately?

17 A. I think this you have already.

18 Q. Is that the area?

19 A. Yeah, that's the area.

20 MADAM CHAIR: Mr. Marek is saying
21 everything below the line 2532 --

22 MS. CRONK: He's actually not, Madam
23 Chair, that's why --

24 MADAM CHAIR: Well, point to that line
25 and I think you said everything below that was a

1 two-coupe cut.

2 THE WITNESS: This is the area now --

3 MS. CRONK: He's now telling me something
4 different.

5 THE WITNESS: No, I'm not telling you
6 anything different.

7 MS. CRONK: Q. This is line 2532. Are
8 you suggesting that the area to the left is also
9 included in the three-coupe?

10 A. This is in three-coupe system,
11 something like this.

12 Q. All right. You can just draw it in
13 red and we'll show the Board.

14 A. Oh yeah.

15 Q. That's very helpful, thank you. All
16 right.

17 A. This was two-coupe system.

18 Q. Thank you. That assists.

19 A. Okay.

20 Q. Thank you very much.

21 MS. CRONK: Madam Chair, could this be A
22 of the exhibit you've just mareked. Mr. Marek has
23 indicated - would you confirm this, please, Mr. Marek -
24 that the area encircled in the red area on the right
25 side of the FRI map is the area that was intended for a

1 three-coupe system and the area to the left was a
2 two-coupe system? (handed)

3 MADAM CHAIR: Thank you.

4 MS. CRONK: Q. Is that correct, Mr.
5 Marek?

6 A. That's correct.

7 MS. CRONK: Could that be A, please, of
8 the --

9 MS. SWENARCHUK: Could we see that,
10 please?

11 MADAM CHAIR: Thank you. That will be
12 Exhibit 1559A.

13 MR. FREIDIN: Can I see it too.

14 MADAM CHAIR: Let's describe this just
15 quickly again, Ms. Cronk.

16 MS. CRONK: This is a duplication of
17 Exhibit 15 --

18 MADAM CHAIR: 59.

19 MS. CRONK: Sorry, 1559 depicting the
20 area of the three-coupe system and the two-coupe
21 system.

22 MADAM CHAIR: Thank you.

23 ---EXHIBIT NO. 1559A: Duplication of Exhibit 1559
24 depicting the area of the
25 three-coupe system and the
two-coupe system.

1 MS. CRONK: Q. Dealing then, Mr. Marek,
2 with the area you have shown as the three-coupe
3 system --

4 A. That is first part, yeah.

5 Q. Yes. As I recall your evidence, you
6 indicated that that area was consecutively or
7 progressively harvested in this three-coupe system
8 approach, the area that you depict?

9 A. Not entirely, because the third coupe
10 in some cases left standing.

11 Q. Okay. The intention was to do it in
12 a three-coupe system.

13 A. Oh, the intention.

14 Q. Is that correct?

15 A. That's correct, the prescription was
16 as such, yes.

17 Q. All right. That's fine. Now, as I
18 understand it, the original planning objective for the
19 three-coupe area as well as for the two-coupe area was
20 for natural regeneration of black spruce; is that
21 correct?

22 A. No, in some area it was also for jack
23 pine regeneration in that system of coupe.

24 Q. All right. Let's talk about the
25 three-coupe system area. Can we call that block 1 so

1 that I don't get confused.

2 A. Okay. Block 1 is --

3 Q. Is the three-coupe.

4 A. Three-coupe for black spruce.

5 Q. All right. And that was intended to
6 be natural black spruce regeneration?

7 A. That is correct.

8 Q. And the rest of the area where a
9 two-coupe system was intended, can we call that block
10 2?

11 A. Block 2, some for black spruce, some
12 for jack pine.

13 Q. All right. Now, just dealing then
14 with block 1 where it was intended that black spruce be
15 naturally regenerated.

16 A. That's correct.

17 Q. I'm referring to transcript Volume
18 254 from November the 1st, 1990, pages 45812, Madam
19 Chair, and for the record two pages prior to that
20 begins the discussion with respect to slide 101, and
21 slide 101 and 102 relate to block 1, the three-coupe
22 system area; is that correct?

23 A. Slide 1 --

24 Q. 101.

25 A. Slide 1 encompasses both.

1 Q. All right. And what about 102?

2 A. 102 is the next one.

3 Q. All right.

4 A. I don't know which one is which. 101
5 is first and 102 is the detailed slide or details of
6 area No. 2.

7 Q. All right. That's block 2, that's
8 fine.

9 A. That's right.

10 Q. Thank you. Then with respect to
11 these slides and the areas indicated in them, Mr.
12 Marek--

13 A. Right.

14 Q. --you were asked the following
15 question by Ms. Swenarchuk.

16 A. Yes.

17 Q. "Q. Now, was the effort to get
18 natural black spruce regeneration back on
19 this cut-over successful?

20 A. Very successful, the first strip, the
21 second strip regenerated very well
22 naturally. Again, the number of
23 seedlings varied from 5-, 10,000 up to
24 20, 30, 40, 50,000 seedlings per acre..."

25 A. That's correct.

1 Q. "...depending on site preparation..."

2 A. That's correct.

3 Q. "...depending on the microsites where
4 these seedlings got established, but in
5 general the stocking of these strips in
6 the first and second year were always way
7 beyong 40, 50, 60, 70 per cent, it was
8 always at least 80 per cent, that's what
9 I think it should be in a natural stand.

10 In other words, you have all kinds
11 of seed coming in with all kinds of
12 seedlings; in other words, I was trying
13 to duplicate nature to some degree or
14 duplicate but not duplicate the approach
15 which, from a natural point of view...

16 Q. Can you tell the Board approximately
17 what the size of land is?

18 A. Quarter of a mile, it was quite a
19 considerable -- it continues here up,
20 further up to the north, it was quite a
21 large area."

22 And then the discussion continued for a
23 number of other pages.

24 A. Correct.

25 Q. That was your evidence with respect

1 to these areas?

2 A. That is correct.

3 Q. All right. Could I ask you to go, if
4 you would please, to Tab 32 of the black binder, Mr.
5 Marek.

6 A. 32.

7 Q. 32.

8 A. Okay.

9 Q. All right. At Tab 32, Mr. Marek, is
10 a summary that has been prepared from the MNR
11 silvicultural records for the areas depicted in slides
12 101 and 102 of the various treatments recorded at the
13 Ministry offices, having been conducted and various
14 assessment results that were obtained.

15 A. That is correct.

16 Q. Now, to go through this I've actually
17 produced for you the relevant SIS cards, and could I
18 ask you to go first to Tab 33 - I'll come back to the
19 summary, Madam Chair.

20 A. All right.

21 MADAM CHAIR: Shall we make these
22 exhibits, Ms. Cronk?

23 MS. CRONK: Yes, all right, we could do
24 that now.

25 At Tab 32, that would be the next exhibit

1 then, Madam Chair.

2 MADAM CHAIR: That will be Exhibit 1560.

3 MS. CRONK: And that's a summary of the
4 silvicultural treatments depicted in slides 101 and 102
5 based on MNR's silvicultural records.

6 ---EXHIBIT NO. 1560: Summary of silvicultural
7 treatments depicted in slides 101
8 and 102 based on MNR's
9 silvicultural records.

9 MADAM CHAIR: All right. The next
10 exhibit...?

11 MS. CRONK: Tab 33, Madam Chair.

12 MADAM CHAIR: Will be Exhibit 1561.

13 MS. CRONK: If I could stop there for a
14 moment, Madam Chair.

15 MADAM CHAIR: All right.

16 MS. CRONK: Q. Mr. Marek, I'm going to
17 suggest to you that the black spruce stocking achieved
18 in this area was considerably less than 80 per cent,
19 and I'd ask you to look at the SIS card materials, if I
20 can call them that, which are Exhibit 1561, that's at
21 Tab 33 that you have there.

22 A. Yeah, I have them.

23 Q. All right. The cards indicate that
24 in 1968 the first strip cut, the first coupe was cut;
25 is that correct?

1 A. Yeah. 1966-67, yeah.

2 Q. All right. There was no site
3 preparation on part of that first cut strip but there
4 was in 1969 some site preparation on part of it; is
5 that correct?

6 A. That is correct, yeah.

7 Q. All right. Now, on the untreated
8 areas; that is, the areas that received no site
9 preparation, in 1969 and 1977 assessments were
10 conducted and I direct you to page 2 of the SIS card
11 and you will see there an indication of the number of
12 seedlings per acre for the 1969 assessment and the
13 percentage stocking achieved.

14 Do you have that, page 2, the SIS card?

15 A. This, this is the SIS card.

16 Q. No, that's the summary, Mr. Marek.
17 I'm asking you to look at Exhibit 1561, at Tab 33,
18 that's -- let me just -- it has an "A" in the
19 right-hand corner.

20 A. "A", that's correct. That's correct.

21 Q. All right. Would you look at page 2
22 of it, please.

23 A. Yeah.

24 Q. Now, at page 2 the results of two
25 assessments are set out, a 1969 assessment--

1 A. That's correct.

2 Q. --and a 1977 assessment.

3 A. That's correct.

4 Q. 1969 was one year after the first
5 coupe was harvested and it indicated - I would ask you
6 to look first at the number of seedlings for black
7 spruce - that there were 700 per acre.

8 A. Oh yeah.

9 Q. Correct?

10 A. That's correct.

11 Q. And secondly, the percentage stocking
12 for black spruce was 34 per cent; correct?

13 A. Correct.

14 Q. It was not 80 per cent in the first
15 year after cut?

16 A. Not in this case, no.

17 Q. No, it was not. And then in 1977--

18 A. That's right.

19 Q. --looking again at the assessment
20 results, there were 2,500 stems per acre.

21 A. That's right.

22 Q. And the percentage stocking was 47
23 per cent?

24 A. That's correct.

25 Q. That's nine years after harvest?

1 A. That's correct.

2 Q. We still don't have anything like 80
3 per cent stocking?

4 A. In this case, no.

5 Q. Nor do we have anything like tens of
6 thousands of seedlings per acre?

7 A. Correct.

8 Q. Then I'd ask you to go next, if you
9 would, Mr. Marek, to the area that received site
10 preparation in 1969 and you'll find the relevant
11 silvicultural records for that at Tab 34.

12 A. Yeah.

13 Q. There's a "B" in the top-hand corner
14 of that.

15 A. Correct.

16 Q. Do you have that?

17 A. That I have.

18 Q. Now, you confirmed for me that part
19 of the area received site preparation in 1969.

20 A. Mm-hmm.

21 Q. As I understand it, that was actually
22 most of the area, most of the first cut area; it was
23 about a hundred acres.

24 A. Yeah.

25 Q. And in 1977 a stocking assessment of

1 the area that had received site preparation was carried
2 out. I'd ask you to go to page 2 of this SIS card.

3 A. There is a map there.

4 Q. Yes, the map is page 3. If you look
5 at page 2.

6 A. Yeah.

7 Q. Page 2 shows the stocking assessment
8 results and it indicates that in 1977 -- do you have
9 that?

10 A. That's right.

11 Q. That's nine years after harvesting of
12 the first coupe and eight years after site
13 preparation--

14 A. Mm-hmm.

15 Q. --the percentage stocking was 45 per
16 cent?

17 A. That's correct.

18 Q. That's quite acceptable based on the
19 minimum stocking requirements in the province; you'd
20 agree?

21 A. As you point out to me. Thank you.

22 Q. Yes. But nothing like 80 per cent
23 stocking?

24 A. No.

25 Q. And it also shows 1,100 stems per

1 acre.

2 A. Mm-hmm.

3 Q. Of black spruce.

4 A. Mm-hmm.

5 Q. Nothing like tens of thousands of
6 seedlings per acre.

7 A. That's correct.

8 Q. And it also shows with respect to
9 poplar, 26 per cent stocking and balsam, 23 per cent
10 stocking.

11 A. That's correct.

12 Q. And that's balsam fir on area that
13 had been site prepared?

14 A. That's correct.

15 MS. CRONK: Could we mark that as the
16 next exhibit, Madam Chair, please.

17 MADAM CHAIR: Yes. That is Exhibit 1562.
18 And could you go back and describe 1561 and then this
19 one, Ms. Cronk?

20 MS. CRONK: Yes, Madam Chair. It's
21 actually described in the index, but for the record,
22 Exhibit 1561 is MNR's silvicultural records pertaining
23 to the first coupe cut in 1968 for block 1.

24 MADAM CHAIR: Thank you.

25 MS. CRONK: Un-site prepared. Exhibit

1 1562 are the MNR's silvicultural records for block 1
2 for the area which received site preparation pertaining
3 to -- the site preparation was 1969.

4 ---EXHIBIT NO. 1561: MNR silvicultural records re
5 first coupe cut in 1968 for block
1, un-site prepared.

6 ---EXHIBIT NO. 1562: MNR's silvicultural records re
7 block 1 for area which received
site preparation in 1969.

8 MS. CRONK: Q. Now, as I understand it,
9 Mr. Marek, the balance of the area which you've
10 described as block 2, what you've shown was intended
11 for a two-coupe system.

12 A. That's correct.

13 Q. All right. And, as I understand it,
14 the first coupe of the balance of the area was cut in
15 1974.

16 A. Correct.

17 Q. And in 1975, the first coupe was site
18 prepared; is that correct?

19 A. Mm-hmm.

20 Q. Could I ask you, if you have the
21 summary sheet, Exhibit 1560, that's the typewritten
22 summary of the treatments, not the SIS -- not the
23 silvicultural records.

24 A. May I see.

25 Q. It's at Tab 32, Mr. Marek. Your copy

1 is over here.

2 A. Tab 32.

3 Q. The summary is right there.

4 A. Yeah, okay. Yeah, that's correct.

5 Q. All right. Could you look at page 2
6 of that summary, please.

7 A. Correct.

8 Q. Now, the first entry for the
9 treatments shows that the first coupe cut took place in
10 1974 and, as you pointed out, that was the two-coupe
11 system on block No. 2, what you've described as block
12 2.

13 A. Mm-hmm. Yeah, okay.

14 Q. Then in 1975 it was site prepared?

15 A. That's correct.

16 Q. And the indication in the MNR
17 silvicultural records is that it was site prepared
18 using a Clark-880 skidder and large barrels; is that
19 correct?

20 A. Right.

21 Q. What's a Clark-880?

22 A. It's a large skidder. It's a skidder
23 which was introduced into operation in the Nipigon
24 District when the Clark was willing to construct
25 special large skidders for large area treatment. In

1 other words, it was a big skidder which can scarify or
2 can treat lots of slash and lots of obstacles. It's a
3 large wide skidder, it's an oversized skidder.

4 Q. It's one of the largest ever made;
5 isn't it?

6 A. Yeah.

7 Q. And then, as I understand it, in 1976
8 part of the area of block 2 that formed part of the
9 first coupe was aerially seeded?

10 A. Seeded, yeah.

11 Q. All right. Can I ask you to go to
12 Tab 35, please, in your book there--

13 A. Here

14 Q. --which is another silvicultural
15 record.

16 A. That's right, correct.

17 Q. This one has a "C" up on the top of
18 it.

19 A. "C". Correct, correct.

20 Q. You have the correct one?

21 A. Yeah.

22 Q. These are the MNR silvicultural
23 records pertaining to the area of that first coupe--

24 A. Right.

25 Q. --for block 2; is that correct?

1 A. Yeah, mm-hmm.

2 MR. FREIDIN: Sorry, what tab are we at,
3 please?

4 MS. CRONK: We're at Tab 35. And I
5 should say for the benefit of the Board, that these SIS
6 records in full are here and a copy of the extracts
7 were provided to Mr. Marek yesterday, which is why I
8 gave him the headache, I gather, because he looked at
9 them for me.

10 Q. Now, with respect to this SIS card,
11 this applies to the aerially -- the direct seeding
12 project carried out on the first coupe?

13 A. That's correct.

14 Q. All right. Am I correct then that
15 this particular block was not left entirely for natural
16 regeneration, some aerial seeding was conducted?

17 A. No, we had some -- obviously we had
18 some failures in the first year, so we decided then
19 treat it again.

20 Q. All right. And am I correct that
21 this --

22 A. That was in jack pine working group
23 mostly.

24 Q. This was in jack pine working group?

25 A. That's right, that's right.

1 Q. All right. Am I correct that this
2 SIS record pertains to the aerial seeding project
3 carried out there?

4 A. Right.

5 Q. All right.

6 MS. CRONK: Could that be the next
7 exhibit, Madam Chair, please?

8 MADAM CHAIR: That will be Exhibit 1563.

9 MS. CRONK: And that's the MNR
10 silvicultural records for aerial seeding on the first
11 coupe of block 2.

12 ---EXHIBIT NO. 1563: MNR silvicultural records for
13 aerial seeding on the first coupe
of block 2.

14 MS. CRONK: Q. Then in 1977, as I
15 understand it, Mr. Marek, planting was carried out on a
16 portion of the first coupe area, planting to black
17 spruce?

18 A. Correct.

19 Q. That was, as I say, in 1977 and in
20 the same year the second coupe was cut?

21 A. Right.

22 Q. Is that correct?

23 A. Right.

24 Q. All right. Could I ask you to go to
25 the SIS records at Tab 36, please.

1 A. 36, correct.

2 Q. These records, as I understand it,
3 confirm the planting that was carried out.

4 A. That's correct.

5 Q. And confirm as well that it pertained
6 to part of the area of the first coupe -- first cut
7 area, that was part of the first cut area was planted?

8 A. That's right.

9 Q. So on that first coupe, we have
10 aerial seeding of jack pine and we have planting of
11 black spruce?

12 A. That's right.

13 Q. All right.

14 MS. CRONK: Could that be the next
15 exhibit, please, Madam Chair.

16 MADAM CHAIR: That will be Exhibit 1564.

17 MS. CRONK: And these are the MNR
18 silvicultural records pertaining to planting on the
19 first coupe of--

20 THE WITNESS: In block 2.

21 MS. CRONK: --of block 2 of Mr. Marek's
22 strip cut.

23 ---EXHIBIT NO. 1564: MNR silvicultural records
24 re planting on the first coupe
25 of block 2 of Mr. Marek's strip
cut.

1 MS. CRONK: Q. And could I ask you to
2 look on Exhibit 1564, the one you still have, the one
3 that is still out?

4 A. D?

5 Q. D, yes.

6 A. Yeah.

7 Q. If we look at the right-hand side at
8 the top under planting, we see an entry for condition
9 of stock. The forms are a little hard to read, but
10 there's an entry, condition of stock. Do you see that?

11 A. Yeah, that's right. Right.

12 Q. Yes. And there's a description
13 indicating that the planting stock was fair, flushed
14 out, brown tops, mold, poor to fair, flushed out,
15 moldy, brown tops; the weather at the time of planting,
16 it was sunny and warm; then there's the date of
17 shipment, the method of shipment, the method of
18 holding, they came to the Beardmore cold storage area,
19 and then the method of planting is described; correct?

20 A. Correct.

21 Q. And then, as I understand it, what
22 happened next, as I indicated, is that in 1977 the
23 second coupe was cut?

24 A. Mm-hmm.

25 Q. And in 1978 that second coupe was

1 site prepared; is that correct?

2 A. Partly.

3 Q. Partly.

4 A. Partly and partly cut too.

5 Q. Partly cut in '78, the balance of the
6 second coupe was cut in '78?

7 A. No, the balance was cut two years
8 ago.

9 Q. All right. The first part of the
10 cutting of the second coupe was done in 1977?

11 A. That's right.

12 Q. With some additional cutting in '78?

13 A. No, I said --

14 Q. I'm sorry.

15 A. The last coupe was partially removed
16 two years ago which was 1989 or '88.

17 Q. All right. But the first cutting of
18 the second coupe was in '77. I am just trying to get
19 the sequence right.

20 A. Partially, yeah.

21 Q. And then the following year the part
22 that had been cut in '77 was site prepared?

23 A. That's correct.

24 Q. All right. Thank you very much.

25 Could I ask you to go to Tab 37, to the MNR

1 silvicultural records shown there and, as I understand
2 it, these records indicate that in 1979 further
3 planting was carried out of part of the first coupe
4 area and part of the second coupe area?

5 A. That's correct.

6 Q. And it was planting of black spruce?

7 A. That's correct.

8 Q. And these are the silvicultural
9 records pertaining to that planting effort; is that
10 correct?

11 A. That's correct.

12 Q. All right. And just to be of
13 assistance to the Board, you'll see for example in
14 reading these cards at the top it says silvicultural
15 artificial regeneration which shows that these are the
16 cards that pertain to the artificial regeneration
17 treatment; is that correct?

18 A. That's correct, yeah.

19 Q. And we know in this case that there
20 was a planting effort, apart from the number of codes
21 that appear, because looking down on the left-hand side
22 of the records there's an entry for planting stock or
23 seed description and it goes on to explain the number
24 of trees planted, the species type, that is how we find
25 that information on the card; is that correct, Mr.

1 Marek?

2 A. Correct.

3 MS. CRONK: Could that be the next
4 exhibit, please, Madam Chair?

5 MADAM CHAIR: That will be Exhibit 1565.

6 MS. CRONK: That exhibit consists of the
7 MNR silvicultural records pertaining to the planting
8 carried out in 1979 on part of the first and second
9 coupes in block 2 of Mr. Marek's strip cuts shown in
10 photos 101 and 102.

11 ---EXHIBIT NO. 1565: MNR silvicultural records
12 pertaining to planting carried
13 out in 1979 on part of first and
14 second coupes in block 2 of Mr.
Marek's strip cuts shown in
photos 101 and 102.

15 MS. CRONK: Now, on this same card, on
16 this same exhibit, Mr. Marek.

17 A. Yes.

18 Q. I'll ask you to go, if you would
19 please, to page 2 for the result of the stocking
20 assessment carried out--

21 A. Mm-hmm.

22 Q. --on these coupes. And looking at
23 the right-hand side of the page in about the middle of
24 the page in a block beside the No. 67, on the
25 right-hand side of the page in a block, it says

1 assessment?

2 A. Yeah.

3 Q. Do you see that?

4 A. Oh yeah.

5 Q. And at the far right-hand side of it
6 it shows -- there's a title, stocking, and that is
7 where the results of the stocking assessment are set
8 out; is that correct?

9 A. That gave me headache.

10 Q. That is the headache.

11 A. The headache.

12 Q. Yes, thank you. And am I correct
13 that these records indicate that in 1984 a stocking
14 assessment of these coupes were carried out and the
15 stocking of black spruce in 1984 was 68 per cent?

16 MADAM CHAIR: I don't see 68.

17 MS. CRONK: In the far -- under stocking
18 in the second column, Madam Chair.

19 MADAM CHAIR: Oh all right, across from
20 survival.

21 MS. CRONK: Yes.

22 Q. And under the stocking part--

23 MADAM CHAIR: Yes.

24 MS. CRONK: Q. --am I correct, Mr.

25 Marek, that it indicates that the stocking results of

1 the black spruce planted stock was 68 per cent, based
2 on the 1984 stocking assessment?

3 A. I have the same problem as you,
4 Madam. Where is that 68, I cannot find it?

5 Q. For the record, the assessment record
6 indicates the results of survival assessments--

7 A. That's right, that's right.

8 Q. --conducted in 1980 and 1981 and
9 stocking assessments in 1984, and it indicates a
10 stocking of 68 per cent for black spruce.

11 A. I do not see -- where is 68?

12 Q. I am pointing to it. Can you read
13 that?

14 A. No, I can't.

15 Q. I see. So you're not sure that that
16 is what it says?

17 A. Well, would somebody else -- do you
18 see 68?

19 MADAM CHAIR: I see 6.8.

20 THE WITNESS: You see 6.8. I see, okay,
21 because I see 1.8. Okay, 6.8. It doesn't make any
22 difference, Madam, here in this case, but I just want
23 to be clear that it was 68 instead of 18.

24 MS. CRONK: Q. If that is so, if that is
25 so, Mr. Marek, if these records indicate 68 per cent

1 stocking levels -- first of all, it's five years after
2 planting; is that correct?

3 A. No, no, I agree with that figure,
4 there's no problem there.

5 Q. Thank you. First of all, those are
6 stocking results five years after planting, the
7 planting was in '79?

8 A. And I will testify to.

9 Q. That's correct, 1979?

10 A. Mm-hmm.

11 Q. The record indicated that some of the
12 planting stock at least was not in the most desirable
13 condition?

14 A. No, no.

15 Q. Right. It was planted nonetheless,
16 and based on the minimum stocking standards in Ontario,
17 quite satisfactory stocking results were obtained at 68
18 per cent. You'd agree they're quite satisfactory?

19 A. Oh yes, 40 per cent is minimum.

20 Q. Having said that, they're nothing
21 like an 80 per cent stocking standard; are they?

22 A. Of course not.

23 Q. Now, as I understand it, and in
24 fairness we should look at the survival. The survival
25 of that stock in 1980 and 1981, that is one year and

1 two years respectively after planting, was very good at
2 93 per cent, very high survival in those years;
3 correct?

4 A. No, no, you are incorrect.

5 Q. According to the records of the
6 Ministry that we just looked at, does it not indicate
7 that the result of the survival assessments conducted
8 in 1980 and '81 showed high survival rates for black
9 spruce and at 93 per cent in each year?

10 A. That is correct.

11 Q. Thank you.

12 A. But no, no, you said more than that,
13 Madam.

14 Q. Perhaps I did, I didn't mean to.

15 A. Well...

16 Q. I'm talking about what the records
17 indicated.

18 A. A very important aspect.

19 Q. All right.

20 A. Okay, I will go through it later on,
21 Madam.

22 Q. All right. What was it that I said
23 that you thought was--

24 A. I will go through it later on when I
25 have a chance.

1 Q. --troublesome? No, no, now is your
2 chance, sir.

3 A. Okay.

4 Q. The survival here in 1980 and '81 was
5 very high; wasn't it? Do you disagree with that; are
6 these records inaccurate?

7 A. No, I don't disagree with that, but
8 that the option was or the facts of the matter here is
9 this, Madam, that this was planted during the summer
10 and nobody is pointing out this was a summer planting
11 in July.

12 Q. Yes.

13 A. Where does it show in these records,
14 Madam?

15 Q. Does that trouble you with respect to
16 that survival?

17 A. Very much so, very much so, because
18 when you do summer planting, which nobody else does, as
19 I did in Nipigon District, it shows you the variance.

20 This was an experiment, Madam, where I
21 tried to prove that summer planting is feasible, that
22 storage which you describe here, storage stock which
23 was spring lifted and later on applied, has a certain
24 option; that is, summer planting is vital and no record
25 is done here on the planting.

1 In other words, I going to be questioning
2 you and the statement made in these records by MNR and
3 I will tell you why later on and so on. So please let
4 me discuss, after you finish, why I agree or disagree
5 with these kind of method of evaluation of forest
6 management renewal.

7 Q. All right. I understand your point,
8 Mr. Marek, and let's just be clear about this, because
9 I understand that on at least one small aspect of what
10 you have just said you may be mistaken.

11 Could I ask you to look at the front page
12 of Exhibit 1565. Sorry, No. 1565 are the MNR
13 silvicultural records labeled "E".

14 Have you got "E"? There's an "E" at the
15 top. Just to identify the right one for you, there's
16 an "E" at the top?

17 A. Yes. Oh, it's "E". It's got also --
18 how can I read "E" if there is only half an "E", Madam?

19 Q. You can't, you absolutely can't. All
20 right.

21 A. All right.

22 Q. Now, looking at Exhibit 1565.

23 A. Okay, Madam.

24 Q. This is the one that pertains to the
25 planting effort--

1 A. That's correct.

2 Q. --that we just discussed?

3 A. That's right, that's right.

4 Q. Now, my understanding is if you look
5 at the right-hand side of the page--

6 A. Okay.

7 Q. --towards the bottom on the numbered
8 entries on this form--

9 A. Right.

10 Q. --there's 51, packing container?

11 A. That's right.

12 Q. 52, special stock. Do you see that?

13 A. Yeah.

14 Q. And 53 is planted or seed, and
15 there's an entry for dates.

16 A. Okay.

17 Q. And it shows quite specifically; does
18 it not, that the planting took place on May 31st and in
19 June on the 15th.

20 A. Did you have examine the rest of
21 these records for where the -- yeah.

22 Q. All right. So with respect to this
23 planting effort, just on this one aspect of it--

24 A. That's right.

25 Q. --you were suggesting that there was

1 no record of when the planting occurred?

2 A. No, it's there.

3 Q. And it's in fact there?

4 A. That's right.

5 - Q. Thank you. Now, all I am suggesting
6 to you, Mr. Marek, with respect to these records is
7 they indicate at least with respect to this block,
8 first, that various forms of artificial regeneration
9 were carried out?

10 A. That's right.

11 Q. That secondly, that while acceptable
12 black spruce stocking levels were achieved, you see the
13 68 per cent in 1984?

14 A. That's correct.

15 Q. For example, nothing like 80 per cent
16 stocking was achieved on either the first or the second
17 coupe as assessed; correct?

18 A. Correct.

19 Q. All right. Then I would ask you to
20 go next, if you would please, to Tab 38, the last of
21 these silvicultural records.

22 My understanding is that in addition to
23 the aerial seeding that took place in 1976, in addition
24 to the planting which took place in 1977, along we come
25 in 1979 and a portion of the second coupe area at that

1 time is hand seeded; am I correct in that?

2 A. That is the seeding record, you're
3 correct.

4 Q. Yes, all right. Now, the
5 silvicultural records that appear at Tab 38 are the
6 records of the seeding treatment; is that correct?

7 A. Mm-hmm, correct.

8 Q. And they show; do they not, the
9 number of trees and the number of hectares planted. My
10 understanding is -- I'm sorry, seeded.

11 My understanding is about 214 acres were
12 seeded and, once again, this took place in 1979 and a
13 stocking assessment was carried out five years later in
14 1984 to assess how it had done; right?

15 A. Correct.

16 Q. And if you look at page 2 of this
17 silvicultural record in the same assessment block that
18 you were looking at on these forms, it's numbered 67,
19 have you got that?

20 A. Yeah, I have -- yeah, this second
21 page.

22 Q. Yes. And you are looking at the
23 block that shows the assessment results?

24 A. Yeah, the far bottom corner there,
25 correct.

1 Q. Yes, thank you. And does it show
2 that in 1984 the black spruce stocking result was 20
3 per cent?

4 A. 20 per cent, that's correct.

5 Q. The jack pine was 30 per cent; am I
6 correct?

7 A. Correct.

8 Q. And that is five years after seeding?

9 A. Correct.

10 Q. And the seeding in this case, as I
11 understand it, was in fact of jack pine; is that
12 correct?

13 A. Correct, yeah -- no.

14 Q. All right.

15 A. No, we were mixing jack pine with
16 black spruce.

17 Q. All right. So what we have ---

18 A. There was certain percentage of seed
19 jack pine and certain percentage, I think it was 15 or
20 20 per cent, of black spruce mixed with the jack pine.

21 Q. All right. So what we have then five
22 years after the seeding effort with jack pine is
23 stocking levels that you and I would agree are not
24 satisfactory?

25 A. No, no, they are all right.

1 Q. Sorry?

2 A. That is okay.

3 Q. They are not satisfactory, 30 per
4 cent?

5 A. No, that is not satisfactory.

6 Q. Exactly. All right. Then, as I
7 understand it, in 1983 a manual cleaning effort was
8 carried out - just to complete the history of the
9 treatments - we had in 1979 the seeding and then in
10 1983 manual cleaning, and then in 1984 the stocking
11 assessment; is that correct?

12 A. That's correct.

13 Q. All right, thank you.

14 MS. CRONK: Could we mark that, Madam
15 Chair, please?

16 MADAM CHAIR: This will be Exhibit 1566.

17 MS. CRONK: And that is the MNR
18 silvicultural records for the seeding project carried
19 out on block 2 in 1979 showing the stocking assessment
20 results in 1984.

21 ---EXHIBIT NO. 1566: MNR silvicultural records for
22 seeding project carried out on
23 block 2 in 1979 showing the
stocking assessment results in
1984.

24 MS. CRONK: Q. And, Mr. Marek, dealing
25 with these records overall, stepping back and looking

1 at block 1 and block 2.

2 A. Mm-hmm.

3 Q. We have a situation on block 1 where,
4 as you suggested to the Board, the treatments were
5 entirely for natural regeneration?

6 A. That's right.

7 Q. Site preparation was carried out, no
8 artificial regeneration treatments on block 1?

9 A. No, no.

10 Q. Just dealing with block 1, we have a
11 situation where in fact the seedling count was not in
12 the tens of thousands of seedlings per acre at year one
13 and year two, and nor was the stocking anything like 80
14 per cent; am I right?

15 A. That's correct.

16 Q. Then we come to block 2, and that
17 area was also part of the strip cutting area which
18 you've identified, and in that particular situation a
19 number of artificial regeneration treatments were
20 carried out, aerial seeding and planting being the two
21 recorded in the records; correct?

22 A. Correct.

23 Q. And in that particular case as well
24 the stocking results of black spruce as planted and of
25 jack pine as seeded, nothing like 80 per cent in either

1 case; correct?

2 A. Correct.

3 Q. But nonetheless some of those
4 stocking levels are entirely acceptable and show, for
5 example, a good 68 per cent stocking result with black
6 spruce?

7 A. Not to me in this case.

8 Q. Not to you. You would have preferred
9 the 80?

10 A. Oh, I would have preferred more than
11 that, I would prefer hundred.

12 Q. Thank you. I want to take you to
13 another portion of the transcript, Mr. Marek, the same
14 transcript, transcript 254, still talking about slide
15 101.

16 MADAM CHAIR: Ms. Cronk, is this a
17 convenient time for our morning break? We got a late
18 start, but we...

19 MS. CRONK: Yes, that would be fine,
20 Madam Chair.

21 MADAM CHAIR: All right, thank you. Is
22 there anything you want Mr. Marek to look over on the
23 break?

24 MS. CRONK: He's got the records.

25 MADAM CHAIR: Thank you.

1 ---Recess taken at 10:40 a.m.

2 ---On resuming at 11:00 a.m.

3 MADAM CHAIR: Please be seated.

4 MS. CRONK: Thank you, Madam Chair.

5 Q. Mr. Marek, we were looking before the
6 break at the planting time for the planting effort on
7 block 2?

8 A. Yeah.

9 Q. And I suggested that they occurred on
10 May 31st and a date in June.

11 A. Right.

12 Q. I have looked at that form again and
13 I think I read it wrong, I think it was conducted
14 between May 31st, not on May 3st only, but between May
15 31st and the date in June.

16 A. It doesn't make any difference,
17 Madam.

18 Q. That is the normal planting time?

19 A. Yes. I would say one could plant,
20 but there are some problems with stock, what kind of
21 condition you have it and weather and -- sorry, there
22 are many aspects of it.

23 Again it's not so simple, it was plant
24 such and such date it's going to be good result. It
25 has nothing to do with it.

1 Q. That is not an unusual planting time
2 though?

3 A. No, no. Usually now they go up to
4 July and sometimes...

5 Q. Yes. In addition, with respect to
6 the block 2, just focussing on block 2 for a moment.

7 A. Right.

8 Q. I understood you to say that it was
9 the jack pine working group. Did I hear that
10 correctly?

11 A. Yeah, you understood correctly.
12 There was part of it, and again this goes back to the
13 pictures here that, Madam Chair, for your -- this was
14 mostly spruce here and there was quite a bit of jack
15 pine intermixed with poplar and black spruce, so you
16 have a completely different, you know, site condition
17 and site typing.

18 MADAM CHAIR: You are pointing to block
19 2, Mr. Marek?

20 THE WITNESS: I am pointing, block 2 is
21 this part.

22 MADAM CHAIR: Yes.

23 THE WITNESS: That was 1970, this was
24 1967, so...

25 MS. CRONK: Q. I wanted to come back to

1 that, Mr. Marek, because - and please correct me if I'm
2 wrong - but that's not consistent with my understanding
3 of the situation.

4 I have been provided with another MNR
5 silvicultural record and I will have copies made, Madam
6 Chair, I don't have them at the moment.

7 A. Correct.

8 Q. I'm going to show this to you, Mr.
9 Marek. It's a three-page silvicultural record which I
10 understand pertains to block 2.

11 A. That's right, right here.

12 Q. The third page is a map showing block
13 2; correct, that's the map?

14 A. That's included in this, yeah.

15 Q. And if we look at the first page of
16 it under the form of treatment--

17 A. Mm-hmm.

18 Q. --it indicates modified harvest cut
19 in strips to secure natural regeneration of black
20 spruce.

21 A. In some area we were trying to
22 accomplish black spruce; in other words, if the sites
23 were mixed wood with representation of jack pine and
24 black spruce, then we were trying to get black spruce
25 back.

1 Q. That was the objective?

2 A. That was the objective.

3 Q. And looking at the forest site
4 description contained on page 1 of this record, it
5 indicates that there were good stands of mature black
6 spruce cover over -- sorry, it indicates that over most
7 of the area there were good stands of mature black
8 spruce with some blowdown on shallow sites; correct?

9 A. That's correct. That again applies
10 for the area more -- so this is one of the problem,
11 Madam, that we have such a variation of sites,
12 variation of condition inside of one square kilometre
13 of stand.

14 Q. Yes. Would it be fair to say that
15 for a large proportion of block 2, however, the
16 objective was to achieve black spruce natural
17 regeneration?

18 A. Yes, that's correct.

19 Q. And that for a large proportion of
20 block 2 there were, prior to treatment, good stands of
21 mature black spruce cover over most of the area with
22 some blowdown as indicated in the SIS record?

23 A. That's again very local, that's
24 correct.

25 Q. Thank you.

1 MS. CRONK: Madam Chair, could we reserve
2 an exhibit number for this and I will have it copied,
3 please.

4 MADAM CHAIR: Yes. This is Exhibit 1567.

5 MS. CRONK: And, for the record, that is
6 the MNR silvicultural records for block 2 showing the
7 extent of block 2 and the treatment objective.

8 ---EXHIBIT NO. 1567: MNR silvicultural records for
9 block 2 showing the extent of
10 block 2 and the treatment
objective.

11 MS. CRONK: Q. Mr. Marek, I suppose the
12 point is this - and I wish you would understand the
13 purpose of these questions coming from me - what I
14 suggest to you is that based on your experience and the
15 evidence that you have given to the Board, that strip
16 cutting as a modified harvesting method does work and,
17 in certain areas, works very well; obviously you and I
18 would agree about that?

19 A. That's correct.

20 Q. But I'm also suggesting to you that
21 it does not universally produce extraordinary results
22 and very high levels of stocking, that doesn't happen
23 in all cases with strip cutting; does it?

24 A. Not in all cases, obviously. Matter
25 of fact, Madam Chair, I have pointed out in some case

1 where we fail we have to do just normal tree planting
2 in order to accomplish...

3 Q. Yes. And indeed on block 2 where it
4 was the treatment objective, according to the
5 silvicultural records, to achieve black spruce natural
6 regeneration, it was necessary to undertake aerial
7 seeding and planting, as well as spot seeding to
8 achieve the kind of stocking results that were achieved
9 and they were 68 per cent black spruce; correct?

10 A. Yes, that's true.

11 Q. So we couldn't get it there by purely
12 natural means, there were these artificial means
13 employed?

14 A. Well, in that condition we failed
15 because of many aspects of the environmental condition,
16 the condition of the year and so on, so you're right.

17 Q. And I would ask you to go to Exhibit
18 1416A, and to save time, those are the terms and
19 conditions that the Board has looked at from Forests
20 for Tomorrow, and on page 2 of them, dealing with
21 silvicultural standards--

22 A. Correct.

23 Q. --in Section 2.1 it is proposed in
24 the fourth paragraph -- I'm sorry, in the third
25 paragraph, and I'll just read it because you don't have

1 your copy here, I have.

2 A. I have copy here, but you read.

3 Q. So I'll read it in.

4 "In all black spruce stands with some
5 mixture of jack pine or larch, a
6 progressive three coupe system shall be
7 used. The last strip shall be harvested
8 only if the adjacent strips have been
9 satisfactorily regenerated to a standard
10 not less than 80% stocking of black
11 spruce."

12 A. That's right.

13 Q. Now, in block 2 you've told us there
14 was jack pine present although most of it was black
15 spruce; correct?

16 A. No, it was mostly jack pine with some
17 black spruce and we tried to convert it into black
18 spruce, Madam.

19 Q. I'm sorry, the silvicultural record
20 that we just looked at indicated that the treatment
21 objective was to achieve black spruce by natural
22 regeneration and that there was expressly good stands
23 of mature black spruce cover over most of the area.
24 That suggests that while there was some jack pine, it
25 was predominantly black spruce; isn't that correct?

1 A. Madam, I know that block so well, I
2 know every acre of it. And let me point, contrary
3 perhaps to the statement in that silvicultural sheet
4 there, the stands were mixed jack pine and spruce on
5 one part, in some cases intermixed with poplar. In
6 area in block 1 it was mostly pure spruce with some
7 poplar.

8 So that would be the condition I would
9 put if I do it again or -- I didn't have done this,
10 this was done by technician.

11 Q. Weren't these records prepared under
12 your supervision?

13 A. Oh, they were under my supervision,
14 that is correct.

15 Q. So you're saying that description is
16 wrong?

17 A. I think that description, after I
18 have examined this area for many years, I would say it
19 is not a pure accuracy which I like to have, let's put
20 it that way.

21 Q. Is it not true, however, that in the
22 type of conditions that you had on block 2, which
23 you've described as being mixed not predominantly black
24 spruce based on your evidence now, that in those mixed
25 conditions it wasn't possible to achieve 80 per cent

1 black spruce stocking even five years after planting?

2 A. Absolutely.

3 Q. All right. So would you agree with
4 me, Mr. Marek, having regard to the terms and
5 conditions that's been proposed for those kinds of
6 mixed stands, that that's a very exacting standard,
7 that's a very high standard?

8 A. The idea -- we're dealing, Madam,
9 with generalities, and that's what I object to, my
10 reason being here is that we have to get out of these
11 generalities and be more accurate, so...

12 Q. I completely agree, and what I'm
13 suggesting to you is that an 80 per cent stocking
14 standard for mixed stands of this kind as illustrated
15 by the results of treatments that you had to undertake
16 on block 2 is a very exacting high standard.

17 Would you agree that far with me me;
18 it's a very high stocking standard?

19 A. No, I don't think so.

20 Q. I see. Notwithstanding that on block
21 2 you weren't able to achieve it?

22 A. That's correct, under those
23 conditions, site preparation and the other which I
24 going to elaborate on, no, we couldn't obviously, so we
25 tried to convert.

1 Q. And in fact you couldn't even do it
2 with artificial regeneration?

3 A. There is again different thing there
4 because there was other reason why we didn't succeed,
5 and I will describe it later on if you give me the
6 opportunity.

7 Q. Perhaps you better tell us now.

8 A. The stock which was planted, Madam
9 Chair, and I was present and I saw it being transported
10 from the Beardmore storage and from the nursery, matter
11 of fact, was in full growing condition; in other words,
12 the aerial growth begun vigorously, the trees were
13 flushed out, some of them were under mold, some of
14 them, especially out of cold storage, and some of these
15 trees just did not have the quality which -- but we
16 have planted them, so...

17 Q. And with them you achieved a 68 per
18 cent stocking standard, 68 per cent?

19 A. Oh yes. We couldn't achieve even 40
20 per cent in some of the areas because the trees were in
21 a condition which I wouldn't plant any more.

22 Q. But the records indicate that overall,
23 based on the 1984 stocking assessment, you got a 68 per
24 cent stocking result?

25 A. Big deal.

1 Q. All right. All I'm saying to you,
2 sir, is that requiring achievement of an 80 per cent
3 stocking standard for black spruce may be very
4 unrealistic given the kind of variable kind of sites
5 that are encountered in these mixed stands; do you
6 agree?

7 A. Disagree.

8 Q. All right. Well, perhaps we'll leave
9 it there. The other suggestion you made, as I
10 understood it, before the break was that you had some
11 difficulty or some comment to make about the record
12 keeping.

13 A. Yes.

14 Q. All right.

15 A. Very much so. I will be dealing with
16 it, Madam.

17 Q. Well, I'd like to hear it now. What
18 is the problem that you have with the records that were
19 kept and put together with respect to these blocks?

20 MS. SWENARCHUK: Mr. Marek, you'll have
21 to turn that board so that the rest of us can see.

22 THE WITNESS: Madam Chair, can you see?
23 Now we going to do it.

24 MADAM CHAIR: We can't see the bottom few
25 lines.

1 MS. CRONK: Could I suggest that it could
2 be turned just a bit, if you can still see it
3 because -- thank you.

4 MR. MARTEL: We can't see the bottom at
5 all.

6 MS. CRONK: I see.

7 MADAM CHAIR: In front of the screen
8 perhaps, Mr. Marek.

9 MS. CRONK: I think maybe you've come
10 back a little too far again, Mr. Marek.

11 MADAM CHAIR: We can see it and you
12 can't.

13 THE WITNESS: Am I under compensation
14 here?

15 MADAM CHAIR: Workers.

16 THE WITNESS: Now she going to help me.

17 MS. CRONK: Can the Board see that?

18 MR. MARTEL: Yes, but nobody else can.

19 THE WITNESS: Nobody else can.

20 MADAM CHAIR: That's fine, Ms. Cronk.

21 THE WITNESS: Now, I cannot see it, so I
22 have to go over here. But I don't want -- Madam Chair,
23 I don't want to spend too much time on this problem and
24 here's a clash between a statement presented by OFIA
25 and my philosophy on dependency of assessment and

1 monitoring results of assessment.

2 First of all Madam Cronk presented MNR
3 assessment sheets which I have objected for many, many
4 years. The reason I objected to it is the subjectivity
5 of findings through that kind of approach of
6 assessment. I agree fully that we have to assess our
7 results, we have to monitor results, but the problem
8 is: How you going to do it accurately enough when one
9 certain accuracy say: Okay, here we are going to have
10 new forest.

11 So let's take these sheets, Madam, and I
12 am fully aware of them, this is no surprise to me,
13 Madam, and I have seen them many times and I talk to
14 the technician who establish these things which Domtar
15 eventually inherited and so on.

16 But let me put it this way: The
17 technician goes in the large area of variable
18 conditions, variable conditions not only due to the
19 site conditions but the results of preparation and the
20 results of regeneration, variable.

21 And here total assessment is depending on
22 one or two plots established somewhere in the area of
23 one square mile which has such a terrific variability
24 that in order to monitor you would have to probably,
25 No. 1, have - just guess here - in this case here

1 probably 15, 20 different plots depending on the site
2 condition, depending on the dynamics of these sites
3 after cutting, and this apply generally for all
4 assessment.

5 Now, if you assess two or three plots
6 what may happen is this: That within area of this
7 various site condition and regeneration results and
8 also results of proper and improper scarification
9 technique, so, and you hit the plots where I have been
10 faced last night and say here's only 24 per cent
11 stocking to spruce, there is only 5 per cent stocking
12 to jack pine, there is 90 -- pardon me, there was no
13 90, 65 was the maximum; wasn't it.

14 Okay. You are faced with the fact of
15 absolute uncertainty that you are representing, by
16 these two or three plots, that you put in the total
17 area of assessment. In other words, you're predicting
18 here or guessing that indeed the condition in the total
19 scope of these things, of these total area which is
20 close to area mill treated different times, treated
21 with different site preparation, cut in two or three
22 different coupes and so on.

23 So here we have few plots and with that
24 we're saying this going to be future forest, this is
25 future of our renewal, this condition going to prevail

1 statically here for many years.

2 I am monitoring these blocks for many,
3 many years, reason because I have research plots in it
4 for myself, I also being there when it was established
5 knew what the beginning of these results were.

6 Let me point out, Madam Chair, that I
7 could present tomorrow, tomorrow, matter of fact from
8 my diaries and so, results which will absolutely have
9 very little resemblance of results which I am presented
10 here. And that gave me the headache, nothing else,
11 Madam, nothing else.

12 I knew you were going to present this and
13 I was waiting just to state here very publicly that our
14 assessment of condition and monitoring results of
15 certain condition is one important task which we have
16 to improve in order to get a total picture of at least
17 in situ in that time sphere resembling the truth or
18 relative truth which apply for that area of square mile
19 here as you see on the photographs.

20 Now, there are other aspects and may I
21 point out to you that in this area we have experimented
22 that time because, you know, in 60s and 70s we had a
23 problem with slash, we had a problem with over
24 abundance of slash condition; in other words, debris on
25 the ground, we have problem that time with the fact

1 that we could not, we could not prescribe because for
2 reason of utilization, for reason of advancing the
3 prescription for site preparation which was at the
4 beginning.

5 That's why I have experience with these
6 big 880s which I entice people to buy in order to get
7 better regeneration, or better site preparation to
8 encourage better regeneration. So in some cases the
9 final coupe still standing in this area.

10 I was there few weeks ago, matter of fact
11 they still not attempt, the company, to remove the
12 final coupe. In other words, there was one coupe, two
13 coupes, three coupes, there's still final coupe there
14 in many stands.

15 There's still seed source there after 15,
16 20 years, so you have a problem with residual seed
17 source; you have a problem with poplar seed source
18 which was left on these cut-overs as such; in other
19 words, poplar was not removed, just encouraging of
20 course the coppicing and that in turn has a very great
21 effect on establishment of black spruce regeneration.

22 Now, let me point out, Madam Chair, that
23 in some area which I inspect you have hundred thousand
24 regeneration of black spruce, on the other hand you
25 have complete failures.

1 And the third condition I would describe
2 here is this, where poplar could took or could take its
3 hold and occupy these sites, the black spruce
4 regeneration was completely wiped out.

5 And to my knowledge and to my research
6 which I have done in this area, in two or three years,
7 areas I tally up to, yes, over 80 per cent regeneration
8 to black spruce, after say five years I got nothing
9 because it was smothered, it was completely wiped out
10 by the competition of poplar.

11 In some cases, again I simplify, because
12 in some cases black spruce survive under these
13 competition, the black spruce is now 40, 45 per cent
14 survival, but you see to judge, to judge that, not only
15 the survival but the dynamics of these systems in the
16 forest by simply putting one or two plots in the area
17 does not justify our conclusion that we have succeeded
18 or we have failed.

19 Madam Cronk presented one case out of
20 many and here being under oath and being aware of these
21 condition from year to year, following dynamics because
22 we have established here kind of precedent for whole
23 thing, we tried to get jack pine on sites, we tried to
24 get black spruce on certain other sites, we failed; in
25 some cases we've succeeded in other words.

1 But to say here is the answer presenting
2 one case of many is poor forestry, and please bear with
3 me, that I am very much anxious that finally we get out
4 of this dilemma where Madam Cronk and I are fighting
5 here an saying I am right and I am right or we are
6 right. No, this system is going to lead to medocrity
7 of present task, medocrity of successes and I am very
8 much bothered when I am faced with sincere presentation
9 on one part of the companies over the situation, and
10 here I have to say: Look, why don't we look at other
11 side which I can testify to.

12 So it's not surprise to me, Madam, that I
13 am presented with these which I think are inadequate,
14 which inaccurate which only present one case of many.

15 MS. CRONK: Q. All right. Mr. Marek,
16 just a few follow up questions.

17 A. Please.

18 Q. And it's important that you express
19 your views fully to the Board, so I am grateful for
20 what you just explained.

21 First of all, let's deal with the record
22 aspect of it, first.

23 A. Correct.

24 Q. Am I correct that these MNR
25 silvicultural records, these assessment results shown

1 in these records were prepared as a summary transposed
2 from actual assessment forms prepared individually plot
3 by plot?

4 A. I am aware of it, yes.

5 Q. I am asking you, sir.

6 A. I am aware of it, yes.

7 Q. Others may not be, so I would like to
8 get that established, that that's the case. And am I
9 also correct that you prescriptions for this area,
10 blocks 1 and 2 that we looked at; you set the
11 prescriptions?

12 A. That's correct.

13 Q. You supervised the work that was
14 carried out?

15 A. That is correct.

16 Q. These forms were prepared under your
17 supervision; you may not personally have done them, but
18 they were prepared under your supervision?

19 A. To my dissatisfaction.

20 Q. And you obviously think there are
21 improvements and you have outlined how that should be
22 made in the record keeping, including assessment record
23 keeping?

24 A. In the field.

25 Q. Yes, exactly. But with respect to

1 this particular case, Mr. Marek, let's be clear that I
2 didn't select this case, this was the situation which
3 you explained to the Board with respect to your slides
4 101 and 102; correct?

5 A. Correct.

6 Q. All right.

7 A. And I expect that you take the
8 advantage to hear what I have to say about the
9 condition which I feel are in these.

10 Q. And I am grateful for that, sir, my
11 only point being this: That when you gave your
12 evidence to the Board with respect to this particular
13 one case that you picked--

14 A. Which one?

15 Q. --and you explained to the Board, and
16 when you said that at year one and at year two 80 per
17 cent stocking levels had been achieved, that's year one
18 or year two after harvesting?

19 A. That's right.

20 Q. That was not entirely accurate, with
21 respect.

22 A. Inaccurate to sampling I have chosen,
23 Madam?

24 Q. I see, I see. So you're saying your
25 only sample at year one and year two showed 80 per cent

1 stocking, whereas the records prepared under your
2 supervision did not?

3 A. No. What I am saying is sampling I
4 have chosen represent various -- I am not trying to
5 tell you, Madam, that those records are false, but they
6 are correct only for that specific plot in that
7 specific condition which I have not regarded as a
8 representative.

9 I have put hundreds of plots there, I
10 have walked this area hundreds of times since this
11 project being 1967 and the reason being, Madam Chair,
12 that I didn't do it only for timber purposes, this was
13 a valuable area for moose production which I have
14 initiated many years back because I thought that
15 systematically we are going to look at that area and
16 see timber products and moose products; in other words,
17 the moose environment and study the mosaic of this area
18 because it is area which is very representative for
19 area on the Domtar licence; you have sandy outwashes in
20 this part close to the Vincent Creek and you have
21 shallow soils over bedrock here.

22 So I look at it as total kind of area.
23 Mind you, this is all cut, this is all clearcut now,
24 the surrounding is gone, but here I have selected 15,
25 20 years ago to look at the total systems and see what

1 can we get out of it, how can we manage it.

2 Q. Thank you.

3 MADAM CHAIR: Mr. Marek - sorry, Ms.

4 Cronk - when you and other foresters obtain this kind
5 of information about the area you are responsible for,
6 are you obliged to carry it around in your head or is
7 there some way that you can make it part of the
8 official record of what MNR does?

9 THE WITNESS: There are both things; in
10 other words, you talk about memories, managing by your
11 knowledge of the area which you keep in the head and
12 also you have to manage it by records and here I am
13 questioning the records.

14 MADAM CHAIR: But there is nothing --
15 when you were doing this work, there was no paper that
16 you had to put your assessment in of the silvicultural
17 progress, there was no other piece of paper attached to
18 this kind of a record that you could say, that's what
19 the plot says but my view as a forester who knows the
20 area, this is closer to the real situation?

21 THE WITNESS: Madam, you are pointing in
22 the direction which leads me to believe that in order
23 to have a better view of the development in the area as
24 suggested here that we have to have some kind of
25 combination of two things; the forest management

1 knowledge of the area and also the transfer of that
2 knowledge in the timber management process right from
3 the beginning; is that correct?

4 MADAM CHAIR: Mm-hmm.

5 THE WITNESS: So there are two aspects;
6 how much can you carry in your head, how much could you
7 put down based on the sampling, you know, which shows
8 according to the dynamics of these renewal, and it's
9 got to be -- I don't think it's going to be one or the
10 other, they are in synthesis, where the management
11 forester is very well aware of condition of the land
12 itself, can monitor here and there I do it locally by
13 picking, in other words, randomly I walk and I said:
14 Okay, here I take a look, here I take a look. But
15 doesn't that actually do the same thing what the
16 assessor did here, he just came there and put a plot in
17 one or two, or one here and one over there and moved
18 away.

19 We have to carry somehow with us the
20 knowledge that we are really concerned about the total
21 dynamics of these stands for forest lands. Now, how we
22 going to do it, I am not quite sure, but I think it's
23 going to be combination of these two things, where the
24 manager will be aware of happenings in the bush
25 steadily; in other words, every once in a while he

1 going to take a look at dynamics and with showing the
2 plots like Madam presented here, you know, these
3 assessments, which got to be done not only one or two
4 plots, which going to be done probably 10, 15, 20 plots
5 if it's necessary, depending on these conditions, and
6 we can summarize.

7 MR. MARTEL: Well, that's what worries
8 me. How do we establish the types of plots in an area
9 that reflect the type of forests that you find in each
10 of these areas to establish a better representation of
11 what the regeneration success or failure is?

12 I mean, if it's not precise and if two
13 and three plots are insufficient in an area of a square
14 mile, I guess some areas - and we hear and have heard
15 for two years about the tremendous variety of sites in
16 the forest, and all of them are going to have different
17 results from your efforts to regenerate, how do we do
18 an assessment which more accurately reflects the
19 results or the failures of our efforts?

20 MS. CRONK: Could I, Mr. Martel, put two
21 questions to the witness and see if I can assist, at
22 least in part, with that?

23 MR. MARTEL: Sure.

24 MS. CRONK: Q. Mr. Marek, I put to you a
25 few moments ago that the kind of information that

1 appears in these forms is a summary based on the
2 individual assessments on a plot by plot basis carried
3 out by people in the field; is that correct?

4 A. That's right.

5 Q. Am I correct then that in behind each
6 of these silvicultural records there is an individual
7 plot by plot description form of documentation that
8 contains assessment results for all the plots measured?

9 A. But, Madam Chairman --

10 Q. Am I correct, just that far?

11 A. Well, no, no, this is not enough,
12 Madam. If you are telling me that these individual
13 assessment sheets as you see here - you have got two or
14 three of them - for each -- actually one for each,
15 haven't you?

16 Q. They are summaries, yes.

17 A. One for each, so this is not enough.

18 Q. I am not suggesting it is, I am just
19 saying, am I right that all that background
20 documentation exists with respect to each plot assessed
21 and these are summary documents only?

22 A. Exist, yes.

23 MR. MARTEL: Could we stop there. You
24 said for each, and maybe I don't understand it, for
25 each one assessed, but I'm not talking about each -- is

1 every plot...

2 MS. CRONK: Each plot.

3 MR. MARTEL: Is every acre of every area
4 regenerated or attempted to be regenerated naturally or
5 not through artificial means, is every plot reviewed?
6 I'm not talking about plots that were established, I am
7 talking about every area that we regenerate, or do we
8 pick out -- my understanding is you pick out a number
9 of plots and you go in and assess those to get an
10 average of what might be anticipated in a region.

11 I'm asking, so what if I'm right, I'm
12 asking for something somewhat more difficult?

13 MS. CRONK: I understand.

14 MR. MARTEL: How do you get a better
15 handle if you have so many sites in the forest, and we
16 have heard about the great variety of sites that are
17 there, how are we assured that everything, literally
18 everything is taken into consideration when
19 establishing what the success rate on a regenerated
20 area might be?

21 MS. CRONK: Q. Mr. Marek?

22 A. It has to improve in quantity and
23 quality, Mr. Martel. From my experience, we have
24 neglected the problem I am bringing before you. Our
25 assessment were first, not accurate; No. 2, when the

1 money was short what was cut first was assessed; in
2 other words, the money which was allocated to the
3 program was cut, reason being because region had
4 different priorities and they have assigned that manager
5 originally said: Go ahead and cut.

6 Now, I think that the second problem is
7 that, again we go back to the knowledgeable,
8 experienced foresters who go in the field and will
9 probably say: Look, this is more representative than
10 you were trying to put that plot over here, this is
11 representative area which somewhat different but lots
12 of guessing.

13 Sir, there is no way in boreal forest
14 where we deal with millions of acres or hectares of
15 cut-overs of regenerated areas and under so many
16 conditions that one or two man could be objective
17 enough to do it.

18 Let me put it this way: May I bring you
19 case in Europe where you can monitor acre by acre very
20 clearly every year because if you don't do it in Europe
21 the success will be minimized; in other words, you
22 have to keep in touch and tap on all these little
23 forests inside of the big landscape, as my friend
24 Baskerville pointed out, and I think he was right on,
25 that this monitoring system has got to be improved to

1 the greatest accuracy by combination of having forester
2 there more often in the field.

3 Him as professional going to tell: Okay,
4 this is perhaps the plot or the area we going to sample
5 as representation of maybe 50 acres, hundred acres, but
6 here we are doing a square mile by few plots which may
7 be completely irrelevant to the condition of the total,
8 and that is what you are after, that's what you feel
9 should be monitored and --

10 Q. Well, Mr. Martel is raising a
11 question to elicit your view on the matter, Mr. Marek,
12 and elt's just deal with a couple of aspects of it.

13 A. Okay.

14 Q. Do you regard it as realistic that
15 every acre of the boreal forest treated, be it by
16 natural treatments or artificial treatments, be
17 sampled?

18 A. Madam, in intensive management you
19 have to do that.

20 Q. All right. Are you suggesting that
21 that can occur in the boreal forest in Ontario as
22 distinct from European countries where the forested
23 area is much smaller?

24 A. That is what they do.

25 Q. All right. Are you suggesting that

1 that can occur, not whether it should,, not whether
2 it's desirable realistically; do you say it can happen
3 here?

4 A. I hope so, in intensive area. This
5 was not -- Madam Chair, may I point out to you that
6 these blocks we were just under the examination, this
7 area with intensive management was not proposed to be.

8 Q. I am not talking about blocks 101 and
9 102 now, I am talking generally from the discussion you
10 have had with Mr. Martel, and I understand your opinion
11 to be that each and every acre treated, be it naturally
12 or with artificial treatments, should be sampled and
13 assessed in the entire boreal forest. That is --

14 MADAM CHAIR: No, I think Mr. Marek just
15 clarified that and said in his definition of what is
16 intensively managed areas, which is somewhat smaller
17 than the area of the undertaking or areas treated
18 naturally or artificially; that is areas under a
19 developed system of intensively managed areas, that
20 those areas would be scrutinized for this assessment
21 process.

22 MS. CRONK: Q. That's your evidence?

23 A. Yes.

24 MADAM CHAIR: We don't know how large
25 those areas would be, but it would be much smaller than

1 forested areas today.

2 THE WITNESS: No. 1, much more
3 accessible, that you can be connected to them more
4 often than we do now; in other words, the quality of
5 monitoring will be much more intensive and intensified,
6 but Madam, let's go back to the problem which we are
7 dealing with.

8 MS. CRONK: Well, Mr. Marek, could I ask
9 you this about it, because unless there is some new
10 point that you wish to make, I propose to move on to
11 another aspect of it, and I just want to clarify one
12 item of it. Was there something that you wished to
13 add?

14 A. I have still problem to deal with Mr.
15 Martel's question, who is a taxpayer, a citizen
16 concerned how we are monitoring our forests. Right,
17 okay.

18 May I add to this that I haven't got
19 problem here with, in this case, to be there every year
20 once or twice more to return for moose droppings or the
21 total dynamics of the stand, and perhaps our system or
22 our MNR organization which is responsible as custodian
23 for the forest put more emphasis.

24 Beside the involvement of MNR in these
25 lecture areas - I call them lecture areas - that the

1 Industry should get involved and establish their own
2 plots. Because what bothers me here, Madam Chair, is
3 that since 1977 there was no really monitoring of these
4 conditions; in other words, majority of it was
5 forgotten. Now --

6 MADAM CHAIR: Excuse me, Mr. Marek. I
7 think we do have evidence before us that Industry does
8 some of its own monitoring.

9 THE WITNESS: They do, they do recently.

10 MS. CRONK: Q. Well now, I'm sorry, Mr.
11 Marek, but since the introduction of the FMA program in
12 the early 1980s, is it not your understanding that
13 companies involved in FMA projects have been doing
14 their own plots and their own assessments?

15 A. That is correct.

16 Q. If that's what you mean by recent.

17 A. No, no, no. See, what I'm trying to
18 say here, Madam Chair, is this: that instead of what
19 perhaps they do, lots of monitoring - I see lots of
20 plots now, being throughout the whole cutting area,
21 matter of fact I follow, it's not even necessary how
22 many plots they put in - however, what I'm saying, they
23 should go back to the older things which, you know,
24 will make them aware of history and also the dynamics
25 of the last 20 years.

1 It's not only responsibility of FMA to
2 monitor their own results, they should go back and take
3 a look, a good look on these what you presented me with
4 was presented by MNR.

5 Q. Would you agree, Mr. Marek, that it
6 is the responsibility of the managers carrying out
7 timber management activities to monitor the treatments
8 that they have introduced, of whatever kind, whether
9 it's natural or artificial?

10 A. That's right.

11 Q. And with respect to the MNR
12 silvicultural records that we've reviewed this morning,
13 am I also correcct that they are based on the sampling
14 framework of the day and that they represent the best
15 documents assessment results for this area that are
16 available? That's the case; isn't it?

17 A. (witness gesturing)

18 Q. The reporter doesn't know what that
19 means.

20 A. I don't know. Do you accept this
21 answer, I don't know?

22 Q. Are you aware, Mr. Marek, of any
23 other assessment documented results that you regard,
24 with respect to this area we've looked at, more
25 accurate or even in existence?

1 A. I think my statement is more accurate
2 than this.

3 Q. I said documented records. Is it not
4 the case that the records that we've looked at,
5 whatever their failings may be that you perceive in the
6 sampling system of the day--

7 A. That's correct.

8 Q. --they represent the best documented
9 assessment records for these areas?

10 A. The best.

11 Q. Thank you. Now, Mr. Marek, one of
12 the other things you told the Board in the course of
13 your evidence about these two areas--

14 A. Yeah.

15 Q. --related to the whole area that you
16 told Mr. Martel a few minutes ago that you took on as a
17 project to monitor and to watch on a steady basis.

18 A. Right.

19 Q. And with respect to the entire area
20 in slide 101, you said during the course of your
21 evidence - and this, for the record, Madam Chair, is
22 Volume 254 at page 45821 -- that's just for the record,
23 Mr. Marek.

24 A. Correct.

25 Q. What you said was, in describing the

1 area depicted in that slide:

2 "It's dry here, a few acres, and I think
3 according to the statistics I'm getting
4 from MNR and from these hearings...", I

5 think it should be this hearing,

6 "...the testimony showed two and a half
7 per cent of modified cutting, something
8 like that, I may be wrong a few per cent,
9 but when you talk about the scope of this
10 opening, you talk about mile and a
11 half square."

12 Now, just stopping there. You were
13 talking about block 1 and block 2, the area--

14 A. Mm-hmm.

15 Q. --of your photographs; is that
16 correct?

17 A. Well, yes, I said probably mile, mile
18 and a half.

19 Q. Yes, thank you. Then you went on to
20 say:

21 "This should have been strip cut,
22 probably it's not, most of it is clearcut
23 and planted to jack pine or some of it is
24 not plantd at all, just left. You can
25 see the horror picture I showed before."

1 A. Madam Chair --

2 Q. Excuse me, Mr. Marek.

3 A. Yeah, go on.

4 Q. And that's from the transcript and
5 you pointed at the photographs and background of the
6 photographs; correct?

7 A. Correct, correct.

8 Q. Then you went on to say:

9 "So this is going to require that we
10 embark on new way of thinking in forestry
11 and that is fairly complex."

12 A. Mm-hmm.

13 Q. Now, stopping there. You were
14 referring to the background of photograph 101 when you
15 made those comments?

16 A. Here, the background.

17 Q. And you were suggesting --

18 A. I can qualify. The rest of Vincent
19 Township --

20 Q. You were suggesting, as I understood
21 it, that most of it had been clearcut and planted and
22 that it represented the kind of "horror picture" -
23 those were your words - that you previously described
24 for the Board?

25 A. Yeah, exactly.

1 Q. Mr. Marek, is it not the case that in
2 fact if you look at the background to the area to the--

3 A. Vincent Township.

4 Q. --areas shown in 101 and 102--

5 A. That's right.

6 Q. --that a very large proportion of
7 that area has been strip cut by Domtar on the two and
8 three-coupe system, depending upon the area, a very
9 large proportion; is that correct? Is that correct?

10 A. That's correct. Did you say most of
11 the area?

12 Q. I said a very large proportion of it
13 has been strip cut on the two or three-coupe system?

14 A. No, not very large.

15 Q. Mr. Marek, I am going to ask you, if
16 you would please, to turn up Morrow's article which is
17 in the binder.

18 A. And his maps.

19 Q. And the maps show it; correct?

20 A. Correct.

21 Q. Remember we looked at that yesterday.
22 Mr. Morrow's article appears at Tab 24, Tab 24 of your
23 binder. Could you look at that once the easel is out
24 of the way, please.

25 A. We had it here before, Madam.

1 Q. That's correct, Tab 24.

2 A. Tab 24.

3 Q. That's Mr. Morrow's article. Do you
4 have that?

5 A. That's correct. That's right.

6 Q. And remember yesterday I asked you to
7 look at page 69.

8 A. That's correct, we looked at it.

9 Q. And the map at the bottom depicting
10 the area shown in slide 101.

11 A. Yeah.

12 Q. That was what -- that figure, Figure
13 6 in Mr. Morrow's article, as I understand it, outlined
14 the area proposed for modified harvest cut for the
15 entire area shown in slide 101; is that correct, for
16 the 1986-88 operating period? It showed what was
17 planned to be cut by modified harvesting for that
18 period at the time?

19 A. And you are recalling the slides.

20 Q. No, I am talking about --

21 A. No, you said 101 and 102.

22 Q. Yes. I am talking about Figure 6.

23 A. I see it in front, I know very well
24 that area.

25 Q. I'm saying, the area in the

1 background of slide 101 is shown here in Figure 6 and
2 it shows the area proposed for modified harvest in the
3 operating period 1986-88; is that correct?

4 A. Mm-hmm.

5 Q. Now, we've had a blow-up of that
6 figure prepared, Mr. Marek.

7 A. It's identical with the one I have in
8 front of me. You don't have to -- I am aware.

9 Q. Would you confirm for me that the
10 blow-up of that map that I'm showing you is the same as
11 Figure 6 in Mr. Morrow's article of Vincent Township?

12 A. I can confirm that this is part of
13 Vincent Township which is 10 mile by 10 mile.

14 Q. Thank you. And it's a part shown in
15 Mr. Morrow's article in Figure 6?

16 A. Just a small part.

17 Q. All right. Could you compare what I
18 have shown you to the figure in Mr. Morrow's article,
19 and I suggest that they are showing the identical
20 areas; are they not?

21 A. Yeah, they are, that's the same.

22 Q. Thank you.

23 MS. CRONK: And this, Madam Chair, is
24 from a portion of base map 495873, the scale is
25 1:15,840, Vincent Township, Camp 93, and I would ask

1 that the original be marked as the next exhibit,
2 please.

3 MADAM CHAIR: That's Exhibit 1568.

4 ---EXHIBIT NO. 1568: Portion of base map 495873 at a
5 scale of 1:15,840, depicting
6 Vincent Township, Camp 93.

6 MS. CRONK: Q. Now again, Mr. Marek,
7 looking at what Mr. Morrow showed in Figure 6 in
8 accordance with the exhibit I have just shown you as
9 being proposed for modified harvesting, I suggest to
10 you that a great deal of that area was in fact strip
11 cut as proposed and it was not clearcut.

12 A. This identical part of the Vincent
13 Township has been, correct.

14 Q. A large portion of it in fact?

15 A. No, no, small portion of it. Vincent
16 Township is 10 miles by 10 miles and if you are correct
17 this would be what in miles, 15,000. So this would be
18 very small portion of the area, Madam.

19 Q. You're saying a small portion has
20 been strip cut only?

21 A. Small portion of this total landscape
22 has been strip cut, here.

23 Q. All right. Let me be clear, perhaps
24 it's my fault. In the background of slide 101, the
25 area in the background was the area depicted in

1 Morrow's Figure 6; am I correct? Let's go back.

2 When you said the area in the background
3 was clearcut, were you not referring to this area in
4 Vincent Township?

5 A. Large area been clearcut in Vincent
6 Township, yeah.

7 Q. And I am showing you, Mr. Marek, a
8 part of the depletion map for this area that
9 corresponds to Mr. Morrow's map that has just been
10 marked as an exhibit before the Board and marked on it
11 are areas which I understand to have been strip cut,
12 and I would ask you to take a look at that map and
13 confirm, if you can, that those areas coincide with the
14 areas of which you are aware have been strip cut and
15 that they in fact reflect the areas strip cut precisely
16 as shown in Mr. Morrow's figure. Can you do that?

17 A. Not offhand. Madam, I cannot produce
18 that in two minutes because I cannot see it, No. 1; No.
19 2 --

20 Q. First of all, dealing just with the
21 area shown in Mr. Morrow's figure --

22 A. How does this -- so this is this,
23 right?

24 Q. Yes. And I am suggesting to you as
25 planned for strip cutting as reflected in Mr. Morrow's

1 Figure 6, the depletion map, indicates it was in fact
2 strip cut.

3 A. So there is more -- what we are
4 looking at is --

5 Q. Am I correct so far? Let's do it in
6 steps. Let's do it in steps. Am I correct that the
7 area shown by Mr. Morrow in Figure 6 for proposed
8 modified harvesting is shown on the depletion map as
9 having been strip cut?

10 A. I don't see the boundaries here, I
11 suppose, Madam, so one of the problem we are dealing
12 with two different scales; No. 2 is that there are no
13 Vincent Township boundaries which I can identify with
14 this Vincent here.

15 Q. Mr. Marek, looking at the depletion
16 map, can you not identify this area shown on the
17 depletion map as the same area depicted in Mr. Morrow's
18 Figure 6? If you're unable to do so, please just tell
19 me. But you are not able to do that?

20 A. If I say yes I may be wrong; if I say
21 no I may be wrong too, Madam, so let's be realistic
22 here, we are dealing with something consisting of area
23 which one kilometre is here and one kilometre here is
24 four inches.

25 Q. Could I ask you to do this then, Mr.

1 Marek. I will leave that with you and I will ask the
2 Board to reserve an exhibit number, if I might, for it,
3 and I would ask you to take a look at it over the noon
4 hour, and so that you are clear, what I am suggesting
5 to you -- sorry, Mr. Marek.

6 Just so that you are clear, what I am
7 suggesting to you is that the area shown in the
8 depletion map as having been strip cut in fact
9 coincides with what was planned for strip cutting.

10 A. What was planned and what was --

11 Q. And if you wouldn't mind taking a
12 look at it. If you can confirm it, fine; if not, I
13 will verify that for the Board by other means.

14 A. I can assure you, Madam, that I will
15 look at it over my coffee table.

16 MADAM CHAIR: Thank you. What is of
17 interest to the Board, Ms. Cronk and Mr. Marek, if
18 indeed this area is indeed to the north of the area in
19 slide 101 and adjoins it, or wherever it is, we would
20 like to know if we can see it in slide 101, and then
21 what extent -- is this a pin prick in the area north of
22 the slide, or does it in fact take in the entire area
23 that we see in the slides?

24 THE WITNESS: Mm-hmm.

25 MADAM CHAIR: We can't figure out scales,

1 so somebody has to tell us.

2 THE WITNESS: May I present you with
3 problem here? This is the area that has been cut in
4 1967, here, that's -- in other words, may I identify it
5 here?

6 MS. CRONK: Q. Mr. Marek, could you
7 point out to the Board the lake in the background on
8 photograph 101?

9 A. No, I can't.

10 Q. What, because you don't want to or
11 because you can't see it?

12 MADAM CHAIR: We can see the lake on
13 photograph 101.

14 THE WITNESS: I can see the lake here.
15 There are several lakes.

16 MS. CRONK: Q. Does the lake in
17 photograph 101 correspond with the lake depicted in
18 Figure 6 from Vincent Township from Mr. Morrow's
19 article?

20 A. Yes, I can now.

21 Q. Thank you. And if you did the same
22 thing and you looked at the lake as a reference point
23 on the depletion map, can you then determine the areas
24 cut by strip cut in relation to the lake?

25 A. The '67 cut is -- modified cutting

1 which was done in '67 is obviously on the map here, so
2 it belongs to here, lake is over there, okay.

3 Q. Thank you. All I am saying, can you
4 confirm, Mr. Marek, looking at the location of the lake
5 in the photograph and the location of the lake in
6 Morrow's article that what's shown in Mr. Morrow's map
7 for the area proposed for modified harvesting is part
8 of the background shown in slide 101?

9 A. Yes, Madam.

10 Q. Thank you very much.

11 A. So it took only two minutes if you
12 point out that lake because I didn't see that lake.

13 ---Discussion off the record

14 MS. CRONK: Does that assist, Madam
15 Chair?

16 MADAM CHAIR: Yes. Thank you.

17 MS. CRONK: Q. Thank you very much, Mr.
18 Marek. If you wouldn't mind over the lunch hour
19 looking at that, as I say, if you're able to confirm
20 it, please just indicate it.

21 A. I confirm it now. I see the lake and
22 I see the area and I see the area which was cut, okay.

23 Q. So what I'm suggesting to you then,
24 that the area proposed by Domtar as reflected in Mr.
25 Morrow's article for modified harvest strip cutting was

1 in fact strip cut as planned?

2 A. It was.

3 Q. As shown on the depletion map.

4 A. Well, there is difference between the
5 proposed and the accomplished, right?

6 Q. Yes. I am asking you to compare the
7 depletion map to Mr. Morrow's article and I am
8 suggesting that what was proposed to be strip cut was
9 in fact strip cut.

10 A. No.

11 Q. I see. Well then, over the noon hour
12 would you look at that and be prepared to come back, if
13 you can, and tell me where they are different?

14 A. Right, I can go over it.

15 Q. That's fine.

16 MADAM CHAIR: Ms. Cronk, can you describe
17 Exhibit 1569?

18 MS. CRONK: Is that the Morrow --

19 MADAM CHAIR: That is the depletion map.

20 MS. CRONK: That exhibit, Madam Chair, is
21 the depletion map showing the portion of background in
22 slide 101 referred to by Mr. Marek that was strip cut
23 in accordance with the proposed modified harvest area.
24 And it's depletion map 1985-1986 to date, 1989-1990,
25 and it's from base map 495873 from the 1975 FRI map.

1 Thank you.

2 ---EXHIBIT NO. 1569: Depletion map 1985-1986 to date,
3 1989-1990, from base map 495873
4 from 1975 FRI map, showing the
5 portion of background in slide
6 101 referred to by Mr. Marek that
7 was strip cut in accordance with
8 the proposed modified harvest
9 area.

7 MS. CRONK: Q. Mr. Marek?

8 A. Yes?

9 Q. Mr. Marek, regardless of the exact
10 boundaries of the cut areas, which you are going to
11 consider visually over the noon hour, can we at least
12 agree that the entire area in that background was not
13 clearcut; strip cutting did occur?

14 A. Correct.

15 Q. And if the depletion map which I have
16 shown you is accurate, it suggests a great deal of
17 strip cutting occurred by the two-coupe system.

18 A. What do you mean, great deal of strip
19 cutting occurred?

20 Q. Just looking at the depletion map.

21 A. So...

22 Q. Yes, but it's not in one or two
23 locations, there's a fair amount of area there that has
24 been strip cut.

25 A. Directed here and there. I am very

1 much aware of it now, yes.

2 Q. Thank you.

3 MR. MARTEL: Could we break it down over
4 the lunch hour, as much as possible, to how much of
5 each was done in the area?

6 MADAM CHAIR: Mr. Marek isn't going to be
7 able to --

8 MR. MARTEL: Mr. Marek isn't, but...

9 MS. CRONK: I will see if I can provide
10 that information for you, sir, and if I can't get it
11 this afternoon, I will obtain it for you.

12 MR. MARTEL: Fine.

13 MS. CRONK: Q. My only point, Mr.
14 Marek - and this is what I have asked you keep in
15 mind - was, first of all, that the planning intent for
16 the area as depicted in Mr. Morrow's article was
17 carried out, and I would ask you to confirm that, if
18 you can, when we come back after lunch, that the
19 planning intent was carried out, the area proposed for
20 modified harvest was in fact modified harvest and,
21 secondly, that contrary to the suggestion left as
22 recorded in the transcript from your evidence that the
23 entire area was clearcut, there was a large area that
24 was strip cut.

25 So those are the questions I'm putting to

1 you and I would ask you to consider.

2 A. Okay.

3 MS. CRONK: Madam Chair, one minute under
4 the bell from the noon hour break. It would be
5 appropriate to rise now.

6 MADAM CHAIR: Yes, we will have lunch now
7 and we will be back at 1:20.

8 THE WITNESS: Madam Chair, what bothers
9 me is this. Now, it was recommended - excuse me - that
10 I will be working during the lunch hour here on this
11 instead of going and getting some fresh air. You see,
12 sorry, there is some problem, not that I cannot take
13 it...

14 MS. CRONK: I don't want you to take more
15 than...

16 THE WITNESS: No, no. You will be
17 sitting at your lunch table and I am going to be
18 worrying about your strip cutting and clearcutting.

19 MADAM CHAIR: Mr. Marek, the Board
20 insists that you go out and get some fresh air, that's
21 the first priority, and whatever time is left over,
22 take a look at the maps.

23 But don't devote your entire lunch hour
24 to this, hopefully it can be done quickly. We don't
25 expect you to spend too much time --

1 THE WITNESS: Thank you for your
2 consideration, Madam. I appreciate it, I really
3 appreciate it.

4 ---Luncheon recess taken at 12:00 p.m.

5

6 ---On resuming at 1:45 p.m.

7 MADAM CHAIR: Please be seated.

8 Ms. Cronk.

9 MS. CRONK: Thank you, Madam Chair, Mr.
10 Martel.

11 Before the break, you will recall that I
12 introduced as Exhibit 1567 an MNR silvicultural card
13 that had not been photocopied and included in your
14 brief. Copies have now been provided to the parties
15 and I would like to give two to the Board.

16 MADAM CHAIR: Thank you.

17 MS. CRONK: And one for Mr. Marek.

18 Q. Mr. Marek, could I ask you to go to
19 page 3 of that exhibit that I just handed you?

20 A. Page 3?

21 Q. Yes.

22 A. You just gave me?

23 Q. Yes, the map attached to Exhibit
24 1567.

25 A. Correct.

1 Q. All right. Now, am I correct, Mr.
2 Marek, just so that the record is clear, that this map
3 shows both of blocks 1 and 2 of your strip cutting that
4 we were discussing this morning?

5 A. Yes.

6 Q. And block 1 is in the bottom
7 right-hand corner of the map?

8 A. Approximately.

9 Q. And block 2 is the balance, in
10 approximate terms?

11 A. Mm-hmm.

12 Q. I'm sorry, sir, for the reporter.

13 A. Yes.

14 Q. Thank you. And slide 102, your
15 photograph 102, the Board may recall is the photograph
16 that in the middle has sort of a cul-de-sac, if I can
17 describe it that way?

18 A. That is correct.

19 Q. Am I correct that to locate that
20 cul-de-sac on this map, if we look to the top of the
21 map where it says 114, right in the middle top of the
22 map, it's an FRI map, and 114 at the very top, and look
23 down from it on an angle we see the cul-de-sac.

24 (indicating).

25 114 is at the top, if we look down we see

1 the cul-de-sac and that's the area of slide 102; is
2 that correct?

3 A. We would have to compare it, Madam.
4 We are getting into really nitty gritty of these
5 things.

6 Q. I'd just like to be sure we are
7 talking about the same area.

8 A. We are talking about the same thing
9 all the time; aren't we?

10 Q. If you look at the top of the FRI map
11 where it says 114, you look down on an angle there is a
12 cul-de-sac area right here where it says 103. I'm
13 suggesting that that's the vicinity of slide 102?

14 A. This area here? (indicating)

15 Q. Right here; is that correct?

16 A. Madam, we are -- unless I examine it
17 very carefully and compare it again back and forth...

18 Q. That's fine. I'll leave it then.

19 A. Because I'm not --

20 Q. That's fine.

21 A. You stated one thing, I may say yes
22 or no, and I don't want to get involved with it.

23 Q. If you don't want to get involved
24 with it, that's fine, Mr. Marek.

25 I would like you to hold on to the

1 exhibit and your photograph, please. Looking still at
2 the map, the FRI map that's part of the exhibit?

3 A. Now we are talk about FRI map?

4 Q. I'm sorry, it is in your right hand,
5 Mr. Marek. We are still talking about the FRI map.
6 It's part of Exhibit 1567.

7 A. Mm-hmm.

8 Q. Could you just take a look at that
9 map. I am going to show you another copy of it on
10 which I have circled in red the areas on it which,
11 according to the FRI map, appear to have jack pine
12 stands components.

13 Will you take just a moment, please, and
14 look at it and tell me if you see any others.

15 A. There is Sb8, Pj2.

16 Q. The jack pine components shown on
17 this map?

18 A. In other words, spruce is 8 and jack
19 pine is 2.

20 Q. Yes. Just looking for Pj2 then, do
21 you see any others apart from the ones marked in red?

22 A. Other one marked...

23 Q. Any other jack pine components
24 identified on the FRI inventory for this area apart
25 from the ones that we have circled in red?

1 A. This is most visible one. That's
2 quite a large site here, Madam. Again, we have to go
3 by the boundary of the site itself and I cannot even
4 recognize site boudaries here.

5 Q. Looking at the map, are you able to
6 read the FRI map and see where it says black spruce or
7 jack pine?

8 A. In some cases I can, in many cases I
9 don't. This is a problem I had last night when I was
10 identifying these sites. I have difficulties with it.
11 This is a cut-over map, Madam.

12 Q. Yes, I understand. Starting with the
13 ones that have been circled in red that I have shown
14 you, those are jack pine components?

15 A. It seems like there is Pj visible
16 here, there is Pj here, Pj here, yes.

17 Q. Thank you very much, Mr. Marek.
18 Could I take that sheet back then, please.

19 A. It is interesting proposition to
20 study it more, Madam.

21 Q. Would you like your copy of the
22 exhibit back, sir?

23 A. Yes.

24 Q. Thank you very much.

25 MS. CRONK: Madam Chair, could I ask that

1 the map with the circled jack pine areas that I just
2 showed Mr. Marek be marked as 1567A, please, and I will
3 undertake to make copies of that.

4 THE WITNESS: Madam Chair, may I ask to
5 say a few words on this identification?

6 MADAM CHAIR: Yes, Mr. Marek, you can in
7 just a moment. Could you identify that?

8 MS. CRONK: Yes, Madam Chair. The
9 document I have just given to you is a duplicate copy
10 of the FRI map forming part of Exhibit 1567 on which
11 the jack pine stand components have been identified in
12 red.

13 MADAM CHAIR: Thank you.

14 MS. SWENARCHUK: 1567 was the MNR
15 silvicultural record.

16 MS. CRONK: Yes, the third page of which
17 is the FRI map. I have given the Board a duplicate
18 copy. Thank you.

19 ---EXHIBIT NO. 1567A: Duplicate copy of FRI map which
20 forms part of Exhibit 1567
21 depicting jack pine stand
components identified in red.

22 MADAM CHAIR: You wanted to say, Mr.
23 Marek?

24 THE WITNESS: I just fail to see that
25 anybody accurately can identify these type sites which

1 means that if you have, as the counsel here identified,
2 Sb here and Pj, that doesn't -- what size of these
3 stands are we talking about in hectares because that is
4 the most important thing.

5 Q. It doesn't indicate size, you are
6 right.

7 A. It does not indicate size.

8 Q. What it does indicate, though, is
9 where jack pine components of some size or other are
10 identified in the FRI inventory; correct?

11 A. No, not correct because I cannot hear
12 many of these components here.

13 Q. You cannot hear many of these
14 components?

15 A. Not hear.

16 Q. You cannot see many of the
17 components?

18 A. I cannot see many of them because
19 it's a cut-over map. If I had an original FRI map it
20 would have been much clearer.

21 Madam Chair, I think it should be
22 supplied for my benefit and benefit of the Board here
23 because we are talking about something you have lots of
24 time to look at. I am just preparing -- you know, I
25 prepared for five minutes to look at it.

1 Q. I understand the difficulties, Mr.
2 Marek, and I am grateful for whatever assistance you
3 can provide. It may be that others will have to assist
4 the Board --

5 A. No, I don't think this is fair.

6 Q. If you would like to consider that
7 map further, Mr. Marek, or consider any other FRI
8 version of it that's available to you, I would be
9 pleased to hear from you about it when you have done
10 so.

11 My purpose only for the moment is to file
12 the document to the Board, and that's just been filed.

13 A. Madam, my purpose here is to testify
14 clearly as possible--

15 Q. I understand, sir.

16 A. --exactly, scientifically as
17 possible.

18 Q. I understand.

19 A. Please give me week, I'm going to go
20 to the FRI typing and I can identify and colour for
21 your benefit and benefit of the Board the typing I'm --

22 Q. If you wish to do so, Mr. Marek, by
23 all means I invite you to do so and you will have an
24 opportunity to discuss it with Ms. Swenarchuk in
25 re-examination.

1 A. I would like to -- Madam Chair, if we
2 get in these nitty gritty, I still don't see the
3 purpose of it.

4 However, if there is a claim I'd like to
5 identify it properly, have it coloured so we know what
6 we are talking about. Just making circles because you
7 can see it and I cannot see and arguing workds, this is
8 to me -- I'm not familiar with it. I wish perhaps that
9 some objective will be taken on this kind of
10 examination.

11 MADAM CHAIR: Well, I don't know, Mr.
12 Marek, if Ms. Cronk wants to do anything with this
13 other than say that there were not pure black spruce
14 stands here, there was jack pine where it is located or
15 how much. Is that an issue?

16 MS. CRONK: I don't intend to take it any
17 further, Madam Chair.

18 But in fairness to the witness who is
19 obviously uncomfortable with the marking of the
20 exhibit, for my part, Mr. Marek, you are free to look
21 at any materials you wish to look at and to provide
22 them to the Board before you complete your evidence.
23 My purpose with this exhibit is finished.

24 THE WITNESS: Madam Chair, for last three
25 hours we are talking about few black spruce stands,

1 mixed stands, we are talking about -- I just fail to
2 see that -- it has been stated on several occasions
3 that many of these areas had a mixed component with
4 jack pine in it, that this was mainly black spruce
5 cover.

6 So I cannot see, Counsel, what you are
7 aiming at. I'm sorry to say this.

8 Q. I understand, Mr. Marek. The point
9 only was what the FRI inventory shows as having been
10 black spruce component, mixed component or any other
11 form of species and it has been provided to the Board.
12 That's all. Some later argument may be advanced at the
13 end of the day.

14 A. Okay. Obviously I like to have a
15 clear FRI map--

16 Q. I understand.

17 A. --that shows clearly typing,
18 representation, association and so on because I don't
19 deal with haphazard forestry, Madam.

20 Q. Mr. Marek, over the noon hour you
21 were requested as well to consider the depletion map
22 and the map from Figure 6 from the Morrow article that
23 I provided to you, and do you have some information to
24 provided to the Board in that regard?

25 A. Yes. I thought it's going to be the

1 other way. I thought that you are going to present me
2 with your data first. It seems to me that you have
3 quite an intensive search for scales and all other
4 things. Perhaps you could provide that first and I can
5 confirm it.

6 But, Madam Chair, if you wish my
7 information I am willing to give it to you.

8 Q. Mr. Marek, I would like you, please,
9 to provide the information to the Board that you have
10 based on your review of the depletion map and the
11 Morrow map?

12 A. Madam Chair, can you see?

13 MADAM CHAIR: Yes, we can, Mr. Marek.

14 THE WITNESS: Okay. In ten minutes I
15 have looked at the map and knowing what the scale is
16 and judging by this total area represented here,
17 approximately 16 square miles, and I'm sorry I'm
18 talking about mileage. Perhaps somebody can
19 computerize it into the kilometres and square
20 kilometres and hectares and so on.

21 But it is approximately four or five --
22 16 which represents the area of approximately 16 square
23 miles. That is the total area which we are dealing
24 with.

25 Now, from examining it more cautiously, I

1 noticed, and I know this area fairly well, that they
2 are areas of younger age class which were not cut or
3 not proposed for harvesting. Here in this corner, here
4 in this corner and there is some area which has been,
5 of course, strip cut in the part of these.

6 (indicating)

7 This is young age class which was cut in
8 1958, '59, this has been cut in '67, that's the part of
9 the slide 101, 102 here, that's the strip cutting, and
10 here in the right corner we can see the area which was
11 not cut as yet. (indicating)

12 So when I very, very superficially -- I
13 reduce it probably for two square kilometres which was
14 not harvested, is approximately -- the reduction is 14
15 square miles. We are dealing with area 14 square miles
16 which was harvested previously, 1985, '86 and so on.
17 So we are dealing approximately from 16 to 14 square
18 miles.

19 Strip cut itself, just by -- I didn't
20 have the help of the Ministry there who's got the
21 computer there and who's got the grid, perhaps we
22 should have a grid here, but it seems to me we are
23 dealing with strip cut approximately 3 square miles and
24 these three square miles, of course, are cut in
25 alternate systems.

1 So you are talking about probably up to
2 two square miles of clearcut strips. Okay?

3 Q. Thank you for your assistance. Now,
4 Mr. Marek, when you said that the area was 16 square
5 miles, just so that I have it for purposes of later
6 evidence, on the depletion map are you referring to the
7 entire map or the area in the box?

8 A. This area...

9 Q. In the box?

10 A. What do you mean by box?

11 No, that's funny forest type when we talk about boxes.

12 Q. You will have to help me, sir--

13 A. Oh, really.

14 Q. --I'm not a forester.

15 A. Yes.

16 Q. There seems to be a box enclosed in
17 blue lines.

18 A. Oh, you should have told me that
19 because I computed all this area.

20 Q. That's all I wanted to know. You are
21 talking about the entire area?

22 A. That's correct.

23 Q. Thank you very much.

24 A. Because some strip cutting, I don't
25 know why computer made this because they are strip

1 cutting...

2 Q. I wasn't suggesting you should.

3 Thank you very much.

4 MS SWENARCHUK: Excuse me, what is the
5 exhibit number of the depletion map, please?

6 MS. CRONK: I'm sorry, I didn't mark it
7 on it.

8 MADAM CHAIR: 1569.

9 MS. SWENARCHUK: 1569, Madam Chair?

10 MADAM CHAIR: Yes. 1568 was the Vincent
11 Township map and 1569 shows the...

12 MS. CRONK: The depletion map.

13 MADAM CHAIR: ...the depletion map.

14 MS. CRONK: Q. Mr. Marek, did you have
15 an opportunity, it is quite understandable if you did
16 not, but did you have an opportunity to compare the
17 areas shown as strip cut on the depletion map to the
18 areas shown on Mr. Morrow's Figure 6 as proposed for
19 modified harvesting?

20 A. I'm not quite sure this is identical.
21 May I see it again. I had a problem with that boundary
22 line of the township and it appears to me -- is this
23 boundary here, boundary over here or...

24 Q. That's fine, Mr. Marek. If you are
25 not certain we won't take any further time on it.

1 That's fine.

2 A. St. Vincent Township boundaries are
3 farther up north.

4 Q. Mr. Marek, I would like to move to a
5 new subject area, if we could, please, and that is your
6 evidence before the Board concerning site preparation.

7 A. Madam, before you start, may I be
8 asking the Board Chairman here to come with your
9 estimate because I'd like to compare your estimates
10 with mine, what we are talking -- what area are we
11 talking about. What did you come up with here?

12 Q. Mr. Marek, so that you are aware of
13 it. You will recall I put two questions, that was my
14 purpose. I suggested to you before the break at lunch
15 that the area planned for modified harvesting had, in
16 fact, been modified -- had been cut by strip cuts and I
17 asked if you could confirm that?

18 A. Yes.

19 Q. And I secondly suggested and asked
20 you to compare the two maps and indicate for me if you
21 could whether it corresponded to Mr. Morrow's Figure 6.

22 I have undertaken to the Board to obtain
23 from Domtar what Domtar believes is the percentage in
24 the area that was strip cut versus clearcut and I will
25 do that. I don't have the figures to give you now.

1 A. I see. So you are still in the
2 process of identifying your request.

3 Q. We will leave it, sir. I have given
4 an undertaking to the Board and I have asked you to
5 compare Mr. Morrow's figure to the map and you are
6 unable to help me with that aspect of it.

7 A. Okay.

8 Q. All I was suggesting to you, sir, is
9 that it was clear from the map that the entire area was
10 not clearcut and you have indicated what you think the
11 percentage of strip cutting was compared to the other
12 areas.

13 A. Madam, I am going to repeat the
14 terminology, the area has been clearcut. Indeed has
15 been clearcut in terms of clearcutting.

16 Modified cutting is clearcutting. It's
17 small area management and that's where my difficulties
18 are with many of you who tell me is that clearcut or
19 not clearcut. Yes, that area has been clearcut.

20 That modification of the cut was
21 undertaken and the alternate strips were left. That
22 should be pointed out there, otherwise we are talking
23 generally and that is very dangerous in forestry.

24 MADAM CHAIR: Mr. Marek, just to clarify.
25 Your evidence before the Board a number of days ago was

1 the area surrounding the slides we were looking--

2 THE WITNESS: It was clearcut.

3 MADAM CHAIR: --at was clearcut. Are you
4 now saying that those areas look very much like the
5 slides do because strips were also left?

6 THE WITNESS: Not at all. There is a big
7 difference between my slides and the modification of
8 cut which was done by Domtar later on in the
9 neighbourhood.

10 MADAM CHAIR: But you agree that it is a
11 modified cutting prescription, but the way you describe
12 it it would be clearcut, there is nothing left
13 standing?

14 THE WITNESS: Not nothing. There is
15 something left standing, but in general I call it a
16 clearcut.

17 MADAM CHAIR: And you don't call what you
18 did in slides 101 and 102 clearcutting?

19 THE WITNESS: In modification cuts more
20 area clearcut management. You have to be very precise.

21 MADAM CHAIR: So what you did in slides
22 101 and 102 was a modified small area clearcutting
23 system?

24 THE WITNESS: That's right.

25 MADAM CHAIR: What was done in the

1 - surrounding area was what you would describe as
2 clearcutting period?

3 THE WITNESS: That is correct.

4 MS. CRONK: Q. When you described to the
5 Board the element of the depletion map that was, based
6 on your estimate, strip cutting, the three square
7 miles, that I take it was modified harvesting, small
8 area clearcutting by your terminology?

9 A. That's correct.

10 MS. CRONK: Thank you, Madam Chair.

11 Q. Mr. Marek, turning now then, if we
12 could, to the evidence that you have given the Board
13 with respect to site preparation.

14 A. Right.

15 Q. And you will recall, of course, that
16 there were a large number of slides in your
17 presentation that dealt with various aspects of site
18 preparation?

19 A. Correct.

20 Q. Do I understand your evidence before
21 the Board to be in general terms that site preparation
22 is a very necessary part of renewal activities?

23 A. That's correct.

24 Q. On the sites that you have described
25 to the Board as being fragile or shallow or sensitive,

1 you said, I believe it was to Mr. Martel, that to
2 reduce rutting, to reduce the potential for rutting
3 from site preparation equipment you would use modified
4 cutting, natural regeneration and what you called
5 proper site preparation?

6 A. Delicate site preparation.

7 Q. All right. That's what you meant by
8 proper site preparation?

9 A. Correct.

10 Q. All right. And you indicated that
11 you wouldn't use barrels any longer, you said that type
12 of equipment -- they were monstrous?

13 A. They were absolutely.

14 Q. So do I take from that that you
15 recognize the need for site preparation even on fragile
16 or sensitive sites so long as it is of the delicate
17 variety?

18 A. That is correct.

19 Q. All right. In essence then, as I
20 understand all of your evidence on site preparation,
21 you are concerned not about whether it should be done,
22 but rather that it should be done properly?

23 A. Correct.

24 Q. With the correct equipment?

25 A. Correct.

1 Q. In a way that minimizes damage to the
2 site on which it is conducted?

3 A. Correct.

4 Q. Is that a fair summary of the
5 evidence? You're concerned obviously with the
6 consequences of if it is not done properly?

7 A. Yes, the consequences worries me very
8 much.

9 Q. All right. Now, let's just
10 concentrate, if we could, please, on the issue of
11 rutting because you will remember there were a number
12 of slides that you showed to the Board in which you
13 said that unacceptable rutting damage had been
14 occasioned either by the logging equipment or the site
15 preparation equipment?

16 A. That is correct.

17 Q. You were asked by Mrs. Koven whether
18 there was any scarification equipment available today
19 to minimize rutting and your answer was that: Yes,
20 there is, that it is essentially foreign made and very
21 expensive, and you also said that insofar as you were
22 concerned we are falling behind in the development of
23 the equipment. Do you remember that?

24 A. That iss correct.

25 Q. In general terms?

1 A. That's correct.

2 Q. Mr. Martel asked you a similar
3 question subsequently. He asked you what site
4 preparation equipment would you use to reduce rutting
5 and I'm not sure, certainly in my review of the
6 transcripts, that I fully understand your answer.

7 What equipment specifically, Mr. Marek,
8 do you say is available for site preparation that we
9 should be using in the boreal forest in Ontario that is
10 not currently being used?

11 A. Which is not being currently used.
12 Presently I'm not aware of equipment which would
13 qualify to really minimize the impact of sites working
14 as yet; in other words, which is being used now. I
15 don't know of any.

16 Q. So that when you referred to foreign
17 made equipment that was very expensive, you weren't
18 referring to scarification equipment that was available
19 in foreign countries that we should be using here that
20 would accomplish the kind of site preparation you
21 meant?

22 A. Correct.

23 Q. So we should correct our
24 understanding of that to make sure we understand it
25 correctly?

1 A. Correct.

2 Q. All right. Mr. Marek, you told the
3 Board that you left the employ of the Ministry of
4 Natural Resources in 1984?

5 A. In that time, yes.

6 Q. In that time period, '84. Are you
7 familiar, Mr. Marek, with a publication by the Ministry
8 of Natural Resources entitled Silvicultural Equipment
9 Reference Catalogue for Northern Ontario, which I am
10 informed was introduced in 1985 and has been amended on
11 a number of occasions since?

12 A. I have read it.

13 Q. You have read it?

14 A. I'm aware of that manual.

15 Q. Could I ask you, if you would,
16 please, then to go -- I believe it's Tab 29 of the
17 black binder.

18 A. Yes.

19 Q. At Tab 29 is contained an extract
20 from the MNR publication by the same name,
21 Silvicultural Equipment Reference Catalogue for
22 Northern Ontario and attached as part of the extract is
23 the table of contents and the description of various
24 equipment items.

25 Madam Chair, could we mark that as the

1 next exhibit, please.

2 MADAM CHAIR: Yes. That will be Exhibit
3 1570.

4 ---EXHIBIT NO. 1570: Extract from an MNR publication
5 entitled Silvicultural Equipment
6 Reference Catalogue for Northern
7 Ontario, and attached is the
table of contents and the
description of various equipment
items.

8 MS. CRONK: Q. Mr. Marek, as you are
9 familiar with the catalogue, presumably, therefore, the
10 contents, at least in general terms, of this exhibit,
11 would you agree with me that the table of contents and
12 the detailed descriptions contained in the catalogue
13 outline a large number of site preparation type
14 equipment items for use in the boreal forest of
15 Ontario?

16 A. That is correct, Madam.

17 Q. Yes. And the catalogue identifies
18 which company or government agency is in possession of
19 the particular piece of equipment?

20 A. Yes, okay.

21 Q. And it identifies as well the number;
22 that is, the quantity of the particular pieces of
23 equipment that's available in the possession of each
24 party; is that correct?

25 A. Well, I was not aware of it, but

1 obviously it's there.

2 Q. All right. For example, if you can
3 go to -- I'm not sure your pages are numbered. Let's
4 just go to the fourth page in, for example.

5 MS. SWENARCHUK: Madam Chair, the witness
6 has just said he is not aware of it. This is a manual
7 produced after his departure from the Ministry and
8 perhaps we can have an indication of exactly what it is
9 Ms. Cronk expects this witness to do in relation to
10 this manual.

11 MS. CRONK: There is really just one
12 other point. I understand Mr. Marek to say he was
13 familiar with the catalogue.

14 THE WITNESS: I read it I said.

15 MS. CRONK: Q. Could I, in those
16 circumstance then, ask you to go to page 4, please.

17 MADAM CHAIR: Did you excerpt eight pages
18 from the document for Exhibit 1570?

19 MS. CRONK: I think it's eight. It's
20 nine actually including the cover pages.

21 MADAM CHAIR: You said 1985, but it says
22 1986 here.

23 MS. CRONK: My information is that the
24 catalogue first became available in 1985 and was
25 subsequently amended on a number of occasions and the

1 inventory listing indicates from fall of 1986 as
2 amended.

3 MADAM CHAIR: Thank you.

4 THE WITNESS: I can assure, Madam Chair,
5 I have read it. Now, if I recall these things exactly
6 I cannot say.

7 MS. CRONK: Q. One further question, Mr.
8 Marek. Just by way of example, you can take any page,
9 but if you go to page four, please, the forth one in.
10 I am not sure if it is numbered.

11 It is the one that has on the very top,
12 the first item is cyclone seed.

13 A. Cyclone seed; yes, I've got it.

14 Q. If you come over to the middle
15 column, there is an indication of the MNR in the middle
16 column?

17 A. Blade attachments?

18 Q. I am still at the top of the page
19 dealing with cyclone seed.

20 A. I have it here.

21 Q. The middle column says MNR and then
22 NOR. Do you see that?

23 A. "MNR, NOR Kirkland Lake..."

24 Q. And beside Kirkland Lake in square
25 brackets it says two. Do you see that?

1 A. Two.

2 Q. Yes. Do you know what that means?

3 A. No.

4 Q. Okay, thank you. Would you agree
5 with me, Mr. Marek, that this type of guide relating to
6 silvicultural equipment, including scarification
7 equipment, is a useful tool for practising foresters in
8 the field?

9 A. Yes.

10 Q. All right.

11 MADAM CHAIR: Ms. Cronk, the Board
12 doesn't know what two means either?

13 MS. CRONK: I'm sorry.

14 MS. SWENARCHUK: That's my point, Madam
15 Chair.

16 MS. CRONK: The question I put to Mr.
17 Marek was it indicated the number, the quantity of the
18 number of equipment that were available at a particular
19 location. In this case, two at Kirkland Lake. I can
20 only put that before you, of course, by way of
21 information.

22 THE WITNESS: Madam Chair, may I
23 elaborate on this. When I read it, when I looked at
24 these things I thought No. 2 was some kind of
25 management unit or two same equipment is being used or

1 something like that.

2 MS. CRONK: Q. I understand. In
3 fairness to you, Mr. Marek, you didn't work with this
4 catalogue afer you left the MNR?

5 A. I didn't use it.

6 Q. Could we talk for a moment about the
7 problems of rutting generally. You described in a
8 number of situations in the slides that you showed to
9 the Board what can happen with what you call large area
10 clearcutting if rutting occurs, and you showed them
11 examples of those kinds of things that can happen?

12 A. Madam, may I correct this. That can
13 happen in large area clearcutting just as well as in
14 the small area clearcutting because it's damaged by
15 logging equipment and we are logging strips, so it
16 doesn't -- clearcut strips, so please...

17 Q. You anticipate my questions very
18 well, Mr. Marek.

19 A. I do. Certainly I do.

20 Q. I thank you for it, it saves some
21 time. The whole point is that with modified harvesting
22 measures this same kind of potential for rutting
23 occurs?

24 A. Exactly.

25 Q. In the strip cutting situation, if we

1 can think about that for a moment, am I correct that
2 what happens is that the wood is essentially funnelled
3 to a central landing location as the loggers move down
4 the strips?

5 A. That's correct.

6 Q. All right. So that that central
7 location could be described as a landing and there
8 might be one or more of them?

9 A. That is correct.

10 Q. Right. And that landing area, as the
11 wood is moved down the strips, is subject to repeated
12 mechanical stress by virtue of the equipment coming to
13 that location repeatedly?

14 A. That's correct.

15 Q. And am I also right that at that
16 particular location with alternate strip cutting what
17 you get very often is the kind of rutting problems that
18 you have illustrated in another context in some of your
19 slides to the Board?

20 A. That's correct.

21 Q. Now, could I ask you to go to page 40
22 of your Panel 3 witness statement, please.

23 A. Yes. I have page 40.

24 Q. Page 40. Mr. Marek, I would direct
25 your attention to the first full paragraph.

1 A. "The impact of the harvest machinery
2 is visible..."

3 Q. Yes. What you have indicated with
4 respect to rutting is that:

5 "The impact of harvesting machinery is
6 still clearly visible and adversely
7 affects the efficiency of planting."

8 You go on to talk about what happens on
9 organic sites from certain kinds of equipment which
10 could cause rutting to the surface?

11 A. That is correct.

12 Q. Then you say in the second last
13 sentence of that paragraph:

14 "The percentage between 20 and 50 per
15 cent of areas damaged this way may vary
16 depending upon topography, layout and
17 site conditions."

18 Do you see that?

19 A. Right.

20 Q. All right. Now, you were asked a
21 number of interrogatories about this, Mr. Marek, in
22 particular because the discussion in the preceding two
23 pages appears to be related to the Clay Belt.

24 Now, with respect to those
25 interrogatories, could I ask you to go to Tab 1,

1 please, of the black binder, and if you could look for
2 the interrogatories of the Anglers and Hunters for
3 Panel 3.

4 A. Are you talking about MNR re
5 Beardmore Watchdog Society?

6 Q. No, if you move back before that.

7 A. OFIA/OLMA.

8 Q. The second bundle.

9 MS. SWENARCHUK: OFAH.

10 THE WITNESS: Okay.

11 MS. CRONK: Q. This is question No. 20
12 of the Anglers and Hunters for Panel 3. With reference
13 to the quote --

14 A. I'm not there yet.

15 Q. Sorry, question 20.

16 A. 20. Okay, I've got it. 20, yes.

17 Q. With reference to this question and
18 the quote on page 40, which I just drew your attention,
19 you were asked how the range of 20 to 50 per cent was
20 estimated?

21 A. That's right.

22 Q. And your answer was:

23 "Personal estimate based on experience
24 and ocular observation."

25 A. That's correct.

1 Q. Now, there are a number of other
2 interrogatories that relate to this and the same answer
3 was given in a number of cases.

4 I would like to understand from you, Mr.
5 Marek, where you are saying this has occurred. Is it
6 your evidence, based on your personal estimate, that
7 that is the case in the Clay Belt?

8 A. Right across the board, Madam.

9 Q. Right across the board?

10 A. Right across the boreal forest.

11 Q. Are you saying to the Board that 20
12 to 50 per cent of sites logged across the boreal forest
13 in its entirety has sustained this kind of rutting
14 damage?

15 A. No, I'm not saying that at all. I'm
16 saying that under certain conditions -- it has been
17 stipulated right throughout the whole -- that under
18 certain conditions the damage could be from 20 to 50
19 per cent, that includes the site which are high water
20 level, sites which are being rutted, some sites which
21 are being just used as a dumping ground for debris and
22 so on. This is logging damage I'm talking about.

23 Q. So that I am clear, are you saying
24 then on any given site, on any site within the boreal
25 forest, on that site rutting or logging machinery

1 damage could be sustained as much as 20 to 50 per cent?

2 A. No, not on any site, on specific
3 sites.

4 Q. I see.

5 A. On specific sites, and there the
6 percentage may vary from 20 to 50 per cent.

7 Madam, may I be clear on this. On jack
8 pine sites, this is not the case because in jack pine
9 sites you have completely different site condition,
10 different terrain, different agriculture, but if you
11 deal with these so-called unstable sites and sites
12 which are subject to all kind of environmental changes
13 after logging, here I maintain that the damage could be
14 from 20 to 50 per cent.

15 MADAM CHAIR: So you are referring to
16 black spruce stands?

17 THE WITNESS: I'm talking mainly black
18 spruce stands, correct.

19 MS. CRONK: Q. Are you talking about
20 particular kinds of black spruce sites?

21 A. Specifically the shallow, very
22 shallow sites and these sites which have a problem with
23 rise of water table after cutting.

24 Q. I see. And on those kinds of sites,
25 what you are saying is this kind of effect could result

1 as much as 20 to 50 per cent on the site?

2 A. That is correct.

3 Q. All right. Am I correct that that
4 potential exists, again, regardless of the type of
5 harvesting?

6 A. It's the type of harvesting, use of
7 equipment, certain timing is very important during
8 between the summer, spring and winter. That has been
9 acknowledged that, for instance, summer operation do
10 more damage than winter operation due to the amount of
11 snow on the site.

12 MADAM CHAIR: Mr. Marek, just a
13 clarification. You are not saying 20 to 50 per cent of
14 a large area, you are saying on a specific site of
15 black spruce with shallow soil and rising water table
16 20 to 50 per cent of that one site could be damaged by
17 the logging equipment?

18 THE WITNESS: In this site there would
19 be...

20 MS. SWENARCHUK: Just to clarify, Madam
21 Chair, I think he should said two type of sites; one
22 being the shallow, another being the type that is
23 susceptible to rise in water table.

24 MADAM CHAIR: All right, yes.

25 THE WITNESS: Does that answer?

1 MADAM CHAIR: I just want to know, the 20
2 to 50 per cent, that applies to one site where there
3 has been the damage? You say it could be 20 to 50 per
4 cent of that one site damaged by logging equipment?

5 THE WITNESS: As an example, the area
6 which was described here previously shown on the maps,
7 which was apparently strip cuts, I have tested the area
8 and I came up to 50 per cent of site has been damaged.

9 Now, I have tested some other in the Clay
10 Belt and the same thing. It varies between the site,
11 but it can between 20 and 50 per cent.

12 MADAM CHAIR: So you are saying on slide
13 101, you looked at slide 101 --

14 THE WITNESS: 101, that has been done
15 many years back. Nothing to do with the present
16 cutting practices.

17 MADAM CHAIR: Let me just get this
18 straight. You are not saying in all the Clay Belt, for
19 example, 20 to 50 per cent of sites have been damaged?

20 THE WITNESS: No.

21 MADAM CHAIR: You are saying on these
22 specific black spruce sites?

23 THE WITNESS: On sites which are called
24 unstable; in other words, instability and damages and
25 so on. On these sites the variation is 20 and 50 per

1 cent.

2 MADAM CHAIR: Okay.

3 THE WITNESS: We have to be, again, very
4 site specific.

5 MR. MARTEL: Can you take it one step
6 further. You also talk about depending on the time of
7 year that we are harvesting, so what does that do to
8 the figure, Mr. Marek?

9 Does it reduce the all overall figure
10 depending on when you do it, the type of equipment you
11 use, and so on so that the figure is -- is it 20 to 50
12 per cent or is it 20 to 50 per cent at certain times of
13 the year if you do it using certain types of equipment?

14 THE WITNESS: I think this is a good
15 question because these damages may vary from season to
16 season, it varies from the age of the cut-over because
17 it's all dynamic process. So the damages what I'm
18 talking about is strictly observation at random.

19 I go look at the area at random, I stop
20 in the cut-over, I look at it, measure some of these
21 parameters and say the percentage of damage which is
22 being done at that time of the year is 20, 25, 30, 40
23 per cent.

24 MS. CRONK: Q. Do I understand from
25 that, Mr. Marek, that the answer to Mr. Martel's

1 question is yes, the extent of the damage, the
2 percentage depends on the type of equipment and the
3 time, the season of operation?

4 A. Time of operation.

5 Q. It might not be anything like 20 to
6 50 per cent depending on what type of equipment you
7 used and site conditions and time of year?

8 A. That is correct.

9 Q. Now, you also said, Mr. Marek, in the
10 context of the same discussion about site
11 preparation -- now I am over at page 41.

12 A. Page 41 of my statement of the
13 presentation. Yes.

14 Q. The first full paragraph begins:
15 "The quality of scarification
16 depends on the equipment used and the
17 skill of the operator. In recent years,
18 new machines have been used, but uniform
19 site preparation prescriptions are used
20 over the entire landscape."

21 Do you see that?

22 A. Yes.

23 Q. What did you mean by the entire
24 landscape?

25 A. Entire landscape mean to me a

1 landscape, combination of site types and terrain in the
2 larger compass of larger area; in other words, we have
3 a situation on many FMAs that the geology and the
4 condition of the site change from one acre to the
5 other.

6 For instance, Madam Chair, in certain
7 site types, we have these differences between few feet
8 as a matter of fact. You have upland, you have rocks,
9 then you go down to the drainage and a hundred feet
10 away you would get -- they have these kind of patterns
11 type.

12 On the other hand, we have a large area
13 of fairly homogeneous, several hundred hectare types,
14 that special jack pine flats, the fluvial deposits,
15 site which were glaciated, but in general, yes, I agree
16 with you, Madam.

17 Q. I'm not sure what you were agreeing
18 with. So when you use the term entire landscape, do
19 you mean the entirety of a particular site?

20 A. Combination of many site types.

21 Q. On a particular site?

22 A. No, combination of site types in the
23 landscape or drainage or, say, watershed or something.
24 That's what I'm talking about.

25 Q. I am trying to understand what you

1 intended to communicate by that statement.

2 Are you saying that uniform site
3 preparation prescriptions are used over the entire
4 boreal forest?

5 A. No, not at all.

6 Q. Thank you. So let's reduce it from
7 that. Are you saying that uniform site preparation
8 prescriptions are used for each site type?

9 A. No, they are used over many site
10 types.

11 Q. All right. I take it you would
12 acknowledge, Mr. Marek, that throughout the boreal
13 forest there is a great deal of variation based on
14 current practice in the type of site preparation
15 prescriptions that are carried out?

16 A. There are, but they are not taken as
17 properly adjusted to the site type itself; in other
18 words -- may I bring to your attention.

19 You have a combination of site types,
20 100, 200 acres here, 50 acres here and maybe 10 acres
21 over there. What I have noted is the same equipment is
22 being used right across the landscape. Is that...

23 MADAM CHAIR: Yes, we understand that,
24 Mr. Marek.

25 MS. CRONK: Q. Thank you, Mr. Marek.

1 Could I ask you to turn, if you would, please, to Tab
2 40 of your book, the black binder.

3 At Tab 40 there should appear a copy of
4 what has been marked as an exhibit at Tab 40 of the
5 black binder, sir.

6 A. Tab one?

7 Q. 40, four-zero.

8 A. Yes, 40.

9 Q. There should appear there a copy of
10 Exhibit 1139?

11 A. 1139, correct.

12 Q. Yes. This is an exhibit, Mr. Marek,
13 that was admitted by the Board during the course of
14 evidence on renewal activities by various Industry
15 witness?

16 A. Right.

17 Q. And the evidence before the Board
18 related to a series of five case studies that was
19 presented to the Board and this was a summary of the
20 site preparation options utilized across five different
21 case studies, and as well the regeneration options were
22 utilized?

23 A. Correct.

24 Q. Just looking at the site -- first of
25 all, have you ever seen this before? Have you ever

1 seen this exhibit before?

2 A. I would like to see the whole book,
3 if I may.

4 Q. No, no, just this exhibit. This is a
5 separate exhibit. Have you ever seen this before?

6 This is an exhibit that was put before
7 the Board several months ago. I just want to know if
8 you have ever ever seen it before?

9 A. I don't recall.

10 MADAM CHAIR: Ms. Cronk, you might
11 explain to Mr. Marek so that he isn't confused by the
12 brackets that follow each of the lines, Mr. Marek, and
13 it will say CS 4A. That is referring to a case study
14 that was done in a specific area by a company.

15 THE WITNESS: I see. I see that.

16 MS. CRONK: Q. Are you familiar with the
17 evidence that was given by Industry witnesses with
18 respect to those case studies that were presented to
19 the Board?

20 A. I can't remember every word, but I
21 have read it.

22 Q. In general terms?

23 A. In general terms, correct.

24 Q. Thank you. Just looking at the site
25 preparation options set out in the first part of this

1 exhibit, you will see there are seven of them?

2 A. Right.

3 Q. Would you agree with me that there is
4 a breadth of option selections selected by those items?

5 A. Yes.

6 Q. They also reflect a variety of types
7 of equipment and techniques for site preparation?

8 A. Yes.

9 Q. Could I ask you to go to page 52 of
10 your written witness statement that you were looking at
11 a moment ago.

12 A. Exhibit 52, correct.

13 Q. I am still talking about site
14 preparation, Mr. Marek. I would direct your attention
15 to the second full paragraph beginning with the words:
16 "In the boreal forest..."

17 Do you see that?

18 A. Page 51?

19 Q. No, page 52, sir.

20 A. Oh, page 52.

21 Q. Second paragraph.

22 A. "In the boreal forest there are many
23 examples of misuse of site preparation."

24 Q. Now, in that paragraph you have
25 suggested to the Board that in the boreal forest, I

1 take it as a whole, the boreal forest, there are many
2 examples of the misuse of site preparation; example,
3 the use of heavy scarifying equipment on inappropriate
4 sites?

5 A. Correct.

6 Q. You go on to say:

7 "In the Clay Belt shear blading is a good
8 example of this."

9 A. I presented evidence to it, Madam.

10 Q. Yes, I recall that. You go on to say
11 that:

12 "Shear blading was developed specifically
13 to stimulate the activity of the forest
14 floor in the establishment of natural
15 black spruce regeneration on sphagnum
16 rich sites."

17 A. That's right.

18 Q. You and I talked about that the other
19 day and you told me that you could have low
20 productivity with lots of sphagnum. And then you go on
21 to say:

22 "It..." meaning the technique of shear
23 blading,

24 "...has deteriorated in some cases to
25 nothing more than snow plowing to

1 align the logging debris in order to
2 accommodate tree planters in the spring."

3 A. That's correct.

4 Q. All right. Now, Mr. Marek, am I
5 correct that shear blading is a site preparation
6 technique that was developed in the first instance
7 really in a pioneer fashion in the boreal forest for
8 use on lowland Clay Belt sites?

9 A. I'm aware of it. I talked to Mr.
10 Waito and other foresters who initiated actually this
11 process.

12 Q. It was introduced by them to find a
13 way to properly site prepare initially lowland sites in
14 the Clay Belt?

15 A. For natural regeneration.

16 Q. Yes. And subsequently the technique
17 was developed for use on upland sites as well in the
18 Clay Belt?

19 A. That is correct, as a corridor.

20 Q. Yes. Am I also correct that shear
21 blading is not a technique generally used in the Lake
22 Nipigon FMA area?

23 A. No, the sites are unsuitable for it.

24 Q. All right. Am I also correct, sir,
25 that your own experience in the Clay Belt is quite

1 limited?

2 A. Here we go again, Madam. Limited by
3 six, eight, ten visits. If that is the case limited, I
4 agree with you.

5 Q. You never conducted a shear blading
6 operation--

7 A. Oh, yes, we did.

8 Q. --in the Clay Belt?

9 A. Not in the Clay Belt, no, but in the
10 Nipigon and Jordan region, yes.

11 Q. In the Nipigon region, am I correct
12 that the use of shear blading, and particularly winter
13 shear blading of the kind that you are describing at
14 age 52, has had very limited use because, as you said,
15 the sites aren't suited to it?

16 A. Yeah. There is bedrock and outcrops
17 and so on, so we don't use it.

18 Q. Could you acknowledge, Mr. Marek,
19 that the foresters in the Clay Belt who developed the
20 technique of winter shear blading to deal with the site
21 conditions that they faced have considerably more
22 experience in the use of the technique than you do?

23 A. Yes, they should.

24 Q. Would you defer to their view as to
25 the purpose of the technique, the development of the

1 shear blading technique as to its purpose and its
2 effects?

3 A. As far as -- no, Madam. The purpose
4 is still clear and was presented to the Board. No. 1,
5 site preparation for natural regeneration of black
6 spruce on certain sites and the shear blading for
7 corridor purposes in mixed wood uplands for the
8 planting of black spruce.

9 Q. For example, Mr. Marek, you have
10 suggested in your written evidence and in your oral
11 remarks to the Board that the technique was developed
12 specifically to stimulate the activity of the forest
13 floor in the establishment of natural black spruce
14 regeneration?

15 A. Exactly.

16 Q. That's your understanding of the
17 purpose?

18 A. Just repeat the...

19 Q. All right. If foresters in the Clay
20 Belt experienced in the use of the technique disagreed
21 as to that being the intended purpose of the technique,
22 would you defer to their judgment in the matter, or do
23 you perceive that you know more about the purpose of
24 the technique than do they?

25 A. Madam, that is an issue which I think

1 should be debated because from my own experience,
2 foresters who advocated in many instances shear blading
3 are just perpetuating the problem, and I have similar
4 experience where young foresters who do not have enough
5 experience just try to reinvent the wheel; in other
6 words, they are, like, lumping, it is done Clay Belt so
7 it can be done in Nipigon, it is done in Nipigon, so it
8 can be done in Kenora.

9 This problem exists with foresters who
10 are not experienced and have a problem with
11 understanding the proper method.

12 Q. What I am getting at, Mr. Marek, is I
13 suggest to you that the purpose of shear blading is not
14 what is suggested at page 52, but rather the purpose of
15 shear blading is to realign slash and to remove
16 competition. Do you agree with that?

17 A. That's a different story, I agree.

18 Q. Do you agree that that's the purpose
19 of shear blading?

20 A. No. I don't know if it's really
21 purpose, I doubt it, because sometimes the damages I
22 have seen do not fulfill the requirements.

23 Q. You have also suggested that the
24 purpose for the development of the technique was to
25 stimulate the activity of the forest floor.

1 What I am suggesting to you, Mr. Marek,
2 is that's not the purpose of the technique at all, the
3 purpose of the technique is in fact the reverse, to
4 make sure that the organic layer is left in place over
5 the clay strata in the Clay Belt, that that's the
6 purpose of the technique as it was developed and as it
7 is used in the Clay Belt?

8 A. If positive results are achieved,
9 okay. Fine.

10 Q. I am suggesting to you, sir, that you
11 may be mistaken in your understanding of the purpose of
12 the technique, that it's not to stimulate the activity
13 of the forest floor at all but quite the reverse?

14 A. Realignment of the slash?

15 Q. Is it possible that you are in error
16 about that and that the purpose is in fact to make sure
17 that the organic layer is not disturbed and is left in
18 place over the clay strata in the Clay Belt?

19 A. That may be true, but is that
20 achieved? Is that possible to achieve, Madam?

21 Q. That's a different question and we
22 will come to that.

23 A. Okay.

24 Q. All right. Could I ask you to go,
25 and perhaps to help you do this I am going to provide

1 you a copy of Exhibit 1100 which is the book of case
2 studies introduced to the Board by various Industry
3 companies.

4 That is what you told me you read, the
5 case study materials?

6 Case study 4D, Mr. Marek, was a case
7 study presented by Mr. Gemmell of Abitibi-Price Inc. in
8 Iroquois Falls relating to black spruce Clay Belt
9 management.

10 A. Okay.

11 Q. That case study is found at Tab D--

12 A. Correct.

13 Q. --of Exhibit 1100. Stopping there
14 for a moment.

15 MS. CRONK: Madam Chair, I don't know if
16 the Board had a copy of this exhibit available to them
17 or not. It was on the list, but that was several days
18 ago. We may have another copy.

19 MADAM CHAIR: I don't see it. Do you
20 want us to get it?

21 MS. CRONK: I think it would be useful to
22 have it, but we may have one here if you would just
23 give me moment.

24 MADAM CHAIR: We will borrow Ms.
25 Seaborn's and get ours at the break.

1 MS. CRONK: Thank you. (handed)

2 MADAM CHAIR: Thank you.

3 MS. CRONK: Q. Mr. Marek, I am going to
4 ask you to go to Tab D which is the Clay Belt case
5 study--

6 A. Mm-hmm.

7 Q. --on black spruce management. I hope
8 Ms. Seaborn has a Tab D. I'm not sure...

9 MADAM CHAIR: She has lots of tab in
10 here.

11 MS. CRONK: I want it back.

12 MS. SEABORN: These case studies are dear
13 to my heart.

14 (laughter)

15 MS. CRONK: Q. Page 30, Mr. Marek, if
16 you would of that case study. Page 30.

17 A. I see all Roman numbers here, but I
18 don't see...

19 Q. At the top of the page, page 30.

20 A. I have a D.

21 Q. Yes, you are in the right place.
22 Now, let's look for page 30.

23 A. Page 30.

24 Q. Mr. Marek, I would draw your
25 attention to the section numbered 7.2.2?

1 A. 7.2.2, I have it.

2 Q Alternatives of Site Preparation.

3 A. Right.

4 Q. And you will see that it is indicated
5 in the case study that if the decision is to site
6 prepare, there were three alternatives considered on
7 the Iroquois Falls Forest.

8 They were, in the instance of this case
9 study, winter shear blading, prescribed burning or
10 summer blading and Bracke scalping, and then under
11 subparagraph (a) there is a discussion of winter shear
12 blading. Do you see that?

13 A. Correct.

14 Q. The authors indicate:

15 "This was the method used on the
16 majority of areas where site preparation
17 was required. The frozen ground
18 conditions between January and March made
19 it possible for heavy equipment to work
20 the moist, wet soil conditions without
21 affecting the soil. On the upland clay
22 sites, the frozen soil allowed the shear
23 blade to float above the ground surface
24 clearing debris while, at the same,
25 leaving a thin organic layer over the

1 clay. This organic layer over clay
2 mineral soil produced an ideal planting
3 microsite. Exposed clay mineral soil
4 promoted serious problems of frost
5 heaving and summer desiccation of planted
6 stock."

7 I am suggesting to you, Mr. Marek, with
8 respect to this prescription by Clay Belt foresters of
9 their use of the technique that in fact the purpose of
10 winter shear blading is to leave that clay strata
11 undisturbed and the organic layer over it in place
12 without disturbance of that element of the forest
13 floor. Would you acknowledge that?

14 A. If my learned colleague said that, he
15 must know what he is talking about.

16 Q. Thank you, sir. With respect to the
17 effectiveness of the technique, you have suggested in
18 your evidence at page 52 that the silvicultural
19 effectiveness of winter shear blading is questionable?

20 A. Right. Exactly.

21 Q. Would you agree with me that one
22 measure of silvicultural effectiveness is stocking?

23 A. Stocking after area has been site
24 prepared and restocked?

25 Q. Yes?

1 A. Okay.

2 Q. That is one measure of silvicultural
3 effectiveness?

4 A. Just one.

5 Q. Could I ask you to go to page 50 of
6 this case study, please. That's Appendix 2. Page 50
7 is written at the very top.

8 A. Correct.

9 Q. Now, at Appendix 2 we find the
10 summary of the survival and stocking assessments for
11 the Iroquois Falls case study area which involved the
12 use of winter shear blading and these are survival and
13 stocking assessments taken five years after treatment.

14 I would ask you to look to the columns to
15 the right. Do you see there block A, block B and block
16 C?

17 A. Block A, block B, block C, correct.

18 Q. So that you are clear as to the
19 evidence before the Board, Mr. Marek, the evidence
20 before the Board is that block A was clearcut in the
21 sense that you would refer to large area clearcutting,
22 it's not a modified harvesting method?

23 A. I know. I have seen them.

24 Q. And blocks B and C were modified
25 harvesting treated, block B was a group seed tree

1 method and block C was alternate strip cutting?

2 A. I think I have seen that experiment,
3 yes.

4 Q. This was actually an operational case
5 study in the field. You think you have been there?

6 A. I think I have seen that. As a
7 matter of fact, randomly sampled.

8 Q. Looking at the stocking survey
9 results, would you agree with me that it is apparent
10 that the stocking results achieved first on blocks B
11 and C of 51 and 54 per cent are well above the minimum
12 40 per cent black spruce stocking requirement required
13 in the boreal forest?

14 A. That's right. The minimal
15 requirement by the government to have a spruce working
16 group.

17 Q. Yes. And, secondly, on a comparative
18 basis it appears that the stocking results achieved on
19 the clearcutting block, that is block A, were better
20 than that achieved on those treated by the modified
21 harvesting method. It just happened in this case study
22 that was the case?

23 A. Yes, I read it here.

24 Q. Could I ask you to go to the
25 discussion of this, please, set out at page 43.

1 At page 43 of the case study, Mr. Marek,
2 you will see there is quite a detailed discussion of
3 the results achieved and reported upon in the case
4 study. That's at page 43. I draw your attention to
5 the third paragraph beginning with the words "Appendix
6 2..."

7 Do you see that?

8 A. Yes.

9 Q. It reads:

10 "Appendix 2 summarizes the results of the
11 fifth year survival assessment of the
12 plantation area and provides the results
13 of stocking assessment surveys of blocks
14 A, B and C."

15 That's what we justed look at.

16 "These surveys were completed in 1985.

17 The plantation area of block A indicates
18 an average stocking of 65 per cent. This
19 represents 1,600 well spaced trees per
20 hectare, 650 trees per acre. The
21 naturally regenerating areas, blocks B
22 and C, indicate an average stocking of
23 52.5 per cent. This represents
24 approximately 1,300 trees per hectare or
25 525 trees per acre."

1 A. So have we.

2 Q. The author go on to say:

3 "Both the upland plantation area and
4 the naturally regenerating black spruce
5 lowland areas are well above the minimum
6 acceptable stocking standard of 40 per
7 cent provided for under the FMA and,
8 therefore, are considered to be
9 successfully regenerated."

10 Would you agree with me, Mr. Marek, that
11 looking at the parameter of stocking assessments as an
12 indicator of silvicultural effectiveness it would
13 certainly appear that winter shear blading in this
14 case, operationally in the field, did achieve
15 silvicultural effectiveness. Would you agree with
16 that?

17 A. I don't call it silvicultural
18 effectiveness, Ma'am.

19 Q. I see. The results are, at least on
20 the stocking parameter, at least satisfactory?

21 A. No.

22 Q. Why is it not silviculturally
23 effective in your judgment?

24 A. Because the "government approved
25 guidelines" or stocking specifications do not really

1 express the kind of stocking standards and renewal
2 which I consider satisfactory.

3 There has been studies done over and over
4 again recently which feels very strongly that the
5 standards dictated by the government under forest
6 management agreements are too low.

7 Q. You would like to see them higher?

8 A. That's correct.

9 Q. Apart then from the applicable
10 stocking standards, would you at least go this far with
11 me, first of all, that winter shear blading is an
12 accepted and tried technique in the Clay Belt?

13 A. If the quality is maintained as it is
14 supposed to be maintained, Madam.

15 Q. I'm sorry, I didn't --

16 A. If the quality of shear blading --
17 you see, shear bladeing, Madam and Madam Chair, is very
18 sensitive procedure.

19 When you try to apply standard to expose
20 the AH layer; in other words, the area which you talk
21 about that should be exposed but you shouldn't get any
22 deeper, the quality is extremely difficult to achieve
23 because you are dealing with very narrow strips of land
24 which shouldn't be exposed and when you have a
25 bulldozer pushing snow ahead of you, when you have all

1 kinds of effects of big machinery, it's pretty
2 difficult to get that achievement.

3 Q. Leaving aside the measure of
4 difficulty that may be a challenge to the professional
5 using the technique, would you agree with me that
6 winter shear blading is a tried technique that has been
7 in use for many years in the Clay Belt?

8 A. I agree.

9 Q. It is used with success in that area
10 of the boreal forest by foresters who are experienced
11 with use of the technique?

12 A. Not as should be.

13 Q. You think it can be improved?

14 A. That's right.

15 Q. But you acknowledge that your own
16 experience with shear blading is considerably less than
17 the foresters working in the Clay Belt?

18 A. There are people like you have.

19 Q. Mr. Gemmell.

20 A. They have experience, right.

21 Q. Yes. Considerably more than your
22 own, sir?

23 I say that with no disrespect intended,
24 but the foresters operating in that area of the boreal
25 forest have considerably more experience with this

1 technique than do you?

2 A. Correct.

3 Q. Thank you.

4 MS. CRONK: Madam Chair, is it your
5 intent to take a break this afternoon?

6 MADAM CHAIR: Are you ready, Ms. Cronk?

7 MS. CRONK: Yes, that's fine.

8 MADAM CHAIR: We will have our afternoon
9 break.

10 Do you think you will be finished by the
11 end of today, Ms. Cronk?

12 MS. CRONK: I do not, Madam Chair, but I
13 can tell that we are no more than an hour short and I
14 will do my very best.

15 MADAM CHAIR: Thank you.

16 ---Recess taken at 2:45 p.m.

17 ---On resuming at 3:10 p.m.

18 MADAM CHAIR: Please be seated.

19 MS. CRONK: Thank you, Madam Chair.

20 Q. Mr. Marek, on the same case study,
21 that's case study D at Tab D, the case study volume
22 that I gave you -- it is the other binder.

23 A. (indicating)

24 Q. That's right.

25 A. That's right.

1 Q. Could I ask you to go to page 37,
2 please.

3 A. Case study D.

4 Q. The one we were looking at before the
5 break on black spruce management in the Clay Belt.

6 A. What is the page number?

7 Q. 37.

8 A. 37.

9 Q. Do you remember the numbers are at
10 the top in the middle.

11 A. Yes, 37. Correct, Madam, I have.
12 Natural regeneration?

13 Q. Yes, thank you.

14 A. "We anticipate..."

15 Q. I draw your attention, Mr. Marek, to
16 the discussion under Natural Regeneration and I have
17 some questions I would like to put to you about it.

18 In the first paragraph, the authors of
19 the case study report that:

20 "In 1980, lowland peat sites were
21 identified with the objective of
22 prescribing a form of harvest system
23 such as alternate block cuts or the
24 leaving of group seed trees which would
25 promote natural regeneration of black

1 spruce from trees left standing in the
2 cut-over specifically for that purpose."

3 A. Correct.

4 Q. Now, stopping there. I take it
5 that's the form of harvest prescription that you would
6 favour on appropriate sites? Those would be
7 appropriate prescriptions on appropriate sites?

8 A. On some sites under certain
9 conditions.

10 Q. Then the authors continue:

11 "Since 1980 there has been a trend away
12 from those techniques. Although the
13 alternate block cuts promoted an increase
14 in number of stems per hectare, that is
15 density, following the first cut, it did
16 not increase the stocking, number of
17 stocked plots per hectare when compared
18 to a lowland clearcut. As an example,
19 the assessment of the block cuts within
20 the case study area indicates a stocking
21 at five years of 54 per cent. Other
22 block cuts which were harvested during
23 1980, 1981 indicate a stocking level
24 between 40 per cent and 45 per cent.

25 Lowland clearcuts harvested during the

1 same period of time ranged in stocking
2 between 46 and 69 per cent."

3 Stopping there for a moment. On a
4 comparative basis between alternate block cuts and
5 clearcutting, the experience of these foresters suggest
6 that stocking results that we reviewed before the
7 break, both in terms of density and stocking as
8 measured, were better on the lowland clearcut areas
9 than on the block cut areas. That is what they are
10 indicating?

11 A. Yes, I read it loud and clear.

12 Q. Yes. Then in the third paragraph, I
13 suggest that they report upon observations made on
14 operations in the field which, I suggest to you, are
15 consistent with those we reviewed yesterday morning.
16 They indicate:

17 "Other negative factors which became
18 evident after the first cut was the
19 incidence of blowdown, as well as the
20 mortality which occurred along the edges
21 of the residual blocks."

22 So stopping there for a moment. They are
23 reporting on blowdown and mortality experienced with
24 the modified harvesting method utilized in this case
25 study?

1 A. That's correct. They reported it,
2 yes.

3 Q. And then they further report in the
4 last sentence of the third paragraph:

5 "Finally there was a lack of seed source
6 after the second cut or half of the
7 harvested area."

8 You recall that we talked yesterday about
9 the silvicultural concerns relating to modified
10 harvest, one of them being to ensure an adequate seed
11 source for subsequent cuts?

12 A. And its dispersion.

13 Q. And they are identifying here a
14 problem which they observed based on actually carrying
15 out modified harvesting in this case study area?

16 A. Correct.

17 Q. And then in the last paragraph;

18 "At present, as operations move north on
19 the limit, the proportion of upland sites
20 is decreasing dramatically with the
21 result that the proportion of lowland
22 sites are more typical of the Clay Belt.
23 At least 50 per cent of the sites are
24 black spruce peat land and up to
25 an additional 30 per cent are more

1 susceptible to damage if treated during
2 the frost-free season. The problem
3 associated with those low sites have been
4 discussed in detail. Two critical
5 factors which will ensure low cost
6 regeneration of these peat land sites are
7 protection of the root mat or soil
8 surface and protection of advanced
9 growth. These are key objectives with
10 the mechanical harvesting equipment now
11 being used."

12 Now, stopping there, Mr. Marek. Would
13 you agree that protection of advanced growth and
14 protection of the root mat or soil surface on the sites
15 of the kind described by these authors is appropriate
16 and desirable protection of advanced growth and
17 protection of the root mat or soil? That's desirable?

18 A. Correct.

19 Q. And then finally at the end of the
20 next paragraph, that whole next paragraph deals with
21 --it is a description of the current operating
22 techniques in the black spruce management areas in the
23 Clay Belt and it is indicated that:

24 "They..." That is the authors,
25 Abitibi-Price in Iroquois Falls,

1 "...are using own high flotation
2 equipment on fragile sites during the
3 frost-free season."

4 Now, I take that to be, and I would ask
5 whether you agree, an indication of a deliberate
6 management effort to ensure minimization of site damage
7 during harvesting so as to ensure protection of
8 advanced growth and protection of the root mat and soil
9 surface. Would you agree?

10 A. Yes.

11 Q. Thank you. Now, Mr. Marek, you will
12 recall yesterday that there was some discussion between
13 us, for the benefit of the Board, regarding black
14 spruce seeding efforts in the boreal forest.

15 I would ask you to go to Tab 41, please,
16 if you would, of the big black binder of documents.
17 Not the case studies, the big black binder?

18 A. You are talking about this one?

19 (indicating)

20 Q. Yes, thank you. Tab 41.

21 A. Okay.

22 A. Yes, I have it Madam.

23 Q. What should be at Tab 41, I say that
24 because my copy is in my hands rather than in the tab,
25 what should be there -- and will you recall, Mr.

1 Martel, I indicated yesterday that after the discussion
2 that emerged between Mr. Marek and myself efforts were
3 being made to pull together the relevant documentation
4 on black spruce seeding efforts in the boreal forest.

5 There is a report at Tab 41, Mr. Marek,
6 entitled Evaluation of the Status of Black Spruce
7 Direct Aerial seeding in the Northern Region.

8 Sorry, the Evaluation of the Status of
9 Black Spruce, dated March 1988. Are you familiar with
10 this report, sir? Have you ever seen it before?

11 A. No, I didn't.

12 Q. All right.

13 MS. CRONK: In those circumstances,
14 Madam, can we simply mark it as the next exhibit and
15 leave it for subsequent witnesses to be dealt with.

16 MADAM CHAIR: That will be Exhibit 1571.
17 How many pages in this report?

18 MS. CRONK: I was afraid you were going
19 to ask me that, Madam Chair. I believe they are
20 numbered. There appears to be 32 total.

21 MADAM CHAIR: Thank you.

22 ---EXHIBIT NO. 1571: Thirty-two page document entitled
23 Evaluation of the Status of Black
24 Spruce Direct Aerial seeding in
the Northern Region, dated March
1988.

25 MS. CRONK: Q. Then could I ask you to

1 go, Mr. Marek, if you would, please, to the next tab,
2 Tab 42?

3 A. Yes ma'am.

4 Q. And at that tab there is a document
5 again dealing with black spruce direct seeding efforts
6 and it is described as Forestry Canada, Ontario Region,
7 Upland Black Spruce Directed Seeding Studies, Thunder
8 Bay District, by Flemming and Mause and I am informed
9 that this reflects data as yet unpublished?

10 A. Correct.

11 Q. Have you seen these studies before?

12 A. Correct.

13 Q. You have seen these studies before?

14 A. Yes, I have.

15 Q. Thank you.

16 A. I have visited the area frequently
17 and I'm aware of all the happenings there.

18 Q. Thank you.

19 MS. CRONK: Could we mark that as the
20 next exhibit.

21 MADAM CHAIR: That will be Exhibit 1572.

22 ---EXHIBIT NO. 1572: Thirty-three page document
23 entitled Forestry
24 Canada, Ontario Region, Upland
25 Black Spruce Directed Seeding
Studies, Thunder Bay District, by
Flemming and Mause.

1 MS. CRONK: Q. Am I correct, Mr. Marek,
2 that this document reporting upon these seeding studies
3 deals with seed spot studies, as well as aerial seeding
4 studies?

5 A. Correct.

6 Q. And it reports on the results of
7 various seeding efforts of that kind in a number of
8 areas?

9 A. Multi-purpose seeding efforts, madam.

10 Q. Yes, thank you.

11 MADAM CHAIR: How many pages in this
12 document and what is the date?

13 MS. CRONK: 33, Madam Chair.

14 MADAM CHAIR: And the date of this
15 document?

16 MS. CRONK: Can I have a moment, please.
17 It appears on its face undated, Madam Chair. I will
18 make inquiries.

19 MADAM CHAIR: Thank you.

20 MS. CRONK: Q. Mr. Marek, do you know
21 when these studies were conducted?

22 A. Yes.

23 Q. When? Can you help us? Do you know
24 when the studies were conducted?

25 A. They started way back in 70 -- I

1 think it was continuation actually of these working
2 group; black spruce working group and that's how it
3 started because the question of seeding came up.

4 So CFS delegated Flemming and -- maybe
5 Flemming into research of direct seeding on the area
6 you mentioned, Madam.

7 Q. Mr. Marek, I would like to move to a
8 new area; that is, your evidence dealing with planting
9 efforts in the boreal forest. And, again, I would like
10 to start by ensuring that I have an accurate and fair
11 understanding of what your evidence has been on this
12 issue.

13 MS. SWENARCHUK: Madam Chair, aside from
14 the fact that Mr. Marek is aware of the seeding
15 results, I don't think we have any identification that
16 he is specifically aware of whatever the contents of
17 this information.

18 MADAM CHAIR: Ms. Cronk is moving on to
19 another area, Ms. Swenarchuk. We are going on to
20 planting.

21 MS. SWENARCHUK: In what way is this
22 document filed through Mr. Marek?

23 MADAM CHAIR: I understand it was in
24 response to Mr. Martel's question about what's
25 happening with black seeding -- black spruce seeding.

1 MS. SWENARCHUK: Very well. Thank you.

2 MS. CRONK: That's exactly it.

3 Q. Planting--

4 A. Yes.

5 Q. --in the boreal forest. I wish just
6 to ensure that I understand what your evidence is to
7 the Board on this issue.

8 As I understood what you said, Mr. Marek,
9 you have told the Board generally that you are not
10 against tree planting in the boreal forest?

11 A. No.

12 Q. Quite the contrary, you think -- I
13 think your words were lots of trees should be planted;
14 is that correct?

15 A. I beg your pardon?

16 Q. I said quite the contrry, I think
17 your words were lots of trees should be planted?

18 A. Lots of trees should be planted
19 correct.

20 Q. As I understand your evidence, it is
21 that it should be done in what you perceive to be a
22 better way and we should be careful about where we do
23 it?

24 A. Correct.

25 Q. I understand that's broad strokes

1 only, but in broad strokes --

2 A. Very, very, very broad strokes.

3 Q. Yes. Is that an accurate
4 understanding of the basics of your view on planting?

5 A. Madam Chair, I hopefully expressed
6 that tree planting will be always. Not only Canada or
7 Ontario, but will always be very important part of
8 renewal. What I think is, we should take a closer look
9 at some of these problems we have, as I hear the
10 concern being shared with others.

11 Q. Thank you. And you showed the Board
12 a number of -- again, I am trying to deal with your
13 slides in groups by subject matter.

14 A. Right.

15 Q. You showed the Board a number of
16 slides dealing with planting microsites, planting
17 techniques and offered a number of opinions as to the
18 adequacy or inadequacy of all of that.

19 Could I ask you to go to page 37 of your
20 written evidence.

21 A. Yes.

22 Q. I would direct your attention on page
23 37 to the very last sentence in the last paragraph.
24 This whole paragraph is a discussion of planting since
25 the beginning of FMAs, and you have expressed the

1 opinion that planting has become a silvicultural
2 priority since inception of the FMA program?

3 A. That's correct.

4 Q. At the bottom of that page you make
5 some comments and your views about all of that. At the
6 bottom of the page in the last sentence you say:

7 "At present jack pine and black spruce
8 seedlings are being planted on sites that
9 range from water saturated lowlands to
10 dry bedrock uplands in protection forest
11 reserves."

12 A. That is correct.

13 Q. Now, just dealing with that
14 statement, for a moment, Mr. Marek. You are not
15 suggesting to the Board, are you, that jack pine is
16 being planted as a matter of course on water saturated
17 lowlands?

18 A. In someplaces it is.

19 Q. As a matter of course in the boreal
20 forest?

21 A. Matter of course, yes.

22 Q. Is it your perception that --

23 A. That's correct. My random sampling
24 are showing that regardless of the terrain trees are
25 being planted to certain species which shouldn't be

1 planted there, Madam.

2 Q. Dealing specifically with jack pine,
3 that was my question to you, where do you say that as a
4 matter of course routinely jack pine is being planted
5 in water saturated lowlands in the boreal forest?

6 A. I have shown picture to that effect.

7 Q. Refresh my memory if you can.

8 Generally, where do you say that is happening?

9 A. Well, did you see that jack pine in
10 that dark, black low lying area where jack pine is
11 dead? Maybe we can go back to the pictures so I can
12 refresh your memory, Madam. I thought I was
13 unforgettable. Give me a moment.

14 Q. Sure. While you are doing that, Mr.
15 Marek, perhaps there is another way to get at it. I
16 understand one can find, if one goes to the field and
17 looks for it, one can find situations where jack pine
18 has been planted under water saturated lowland
19 conditions?

20 A. That's correct.

21 Q. I understand you to be saying that it
22 is a prevalent practice. Is that your evidence?

23 A. No, it isn't. I didn't say that. I
24 said when I randomly sampled some of these areas which
25 are planted I have frequently found that the trees

1 which were planted in that area or nitch do not belong
2 there because they were dead.

3 Q. Then it is my inadequacy with words.
4 When I asked you whether it was your evidence that this
5 was happening as a matter of course, I just want to be
6 clear you are not saying that this is happening to any
7 great extent on a regular basis; are you?

8 A. No.

9 Q. Thank you. If that's the case, you
10 needn't bother to identify particular slides unless you
11 wish to.

12 A. I wish to because you have...

13 Q. You also suggested, as I understand
14 it, that the -- sorry, Mr. Marek, I will wait.

15 A. No, please go ahead.

16 Q. You've also suggested -- actually
17 this is a suggestion from the Beardmore Watchdog
18 Society. As I read the evidence of the Society that
19 you have presented to the Board, the Society is also
20 suggesting that planting is occurring in unsuitable
21 areas in the boreal forest interspersed throughout the
22 whole area of the Lake Nipigon watershed?

23 A. That's correct.

24 Q. That's the evidence presented by that
25 Society?

1 A. That's correct.

2 Q. Mr. Marek, I take it that you are
3 aware that the Industry maintains and enforces strict
4 quality controls, standards and procedures with respect
5 to tree planting? You are aware of that?

6 A. I have some reservation when I see
7 results of it, Madam. I have inspected area where I
8 was really embarrassed that the forester can allow
9 trees being put in area unsuitable for trees.

10 In other words, what I have noticed is
11 that trees were dead after a few months or next year or
12 two years after. I was wondering what kind of
13 restriction or what kind of supervision we are actually
14 exercising in order to minimize some of these problems.

15 Q. All right. Again, to perhaps start
16 at the basics. Would you agree with me that it is
17 desirable that quality control standards with respect
18 to tree planting be put in place by the managers
19 responsible for planting and enforced?

20 A. Correct.

21 Q. And do you acknowledge that that is
22 in fact being done and has been done for a good many
23 years by Industry forest managers?

24 They do that, they have quality control
25 standards which they enforce with their tree planting?

1 A. How can they and allow to have the
2 conditions as I am finding out in the cut-over area or
3 planting area.

4 Q. So it is the enforcement aspect of it
5 that you are concerned about?

6 A. Madam, I'm quite -- I'm not quite
7 sure what it is. Is that enforcement or is that
8 perhaps lacking knowledge for prescription where these
9 trees had been planted or not planted. I'm sorry
10 because I like to have a clear --

11 Q. I take your point, Mr. Marek.

12 A. Okay.

13 Q. I take your point. Would you agree
14 with me about this as well, Mr. Marek, that once again,
15 if one goes to the field looking for instances where a
16 tree or trees have been planted in appropriate
17 microsites you are going to find some examples of that?

18 If you go looking for it you are going to
19 find it?

20 A. Most definitely because my testimony
21 is based on these...

22 Q. Is it not also true that if one goes
23 to the field and looks one can also find large expanses
24 of areas where trees have been planted where they have
25 been planted quite adequately and appropriately?

1 A. Yes, I don't doubt it.

2 Q. Okay. Can I ask you to go to Tab 27,
3 if you would, please, of the binder of documents that's
4 been provided to you.

5 A. Are you talking about ...

6 Q. Tab 27 of that black book that you
7 have there.

8 A. Correct.

9 Q. What appears at Tab 27, Mr. Marek, is
10 a copy of a sample tree planting contract between
11 Domtar Inc. and a contractor with respect to tree
12 planting. This was provided last week with the first
13 batch of material. Have you had a chance to look at
14 this?

15 A. Yes. I'm too aware of that and also
16 the manual for Ministry of Natural Resources which is
17 involved in contracting tree planting. Yes, I am.

18 Q. All right. I would ask you to go
19 then, if you would, please -- the pages are numbered at
20 the bottom. You have to sort of unfold them to get
21 there.

22 A. Correct.

23 Q. I would ask you to go first, if you
24 would, please, to Schedule B to the tree planting
25 agreement which is a set of instructions with respect

1 to the planting of trees?

2 A. What page are we dealing with?

3 Q. Page 9.

4 A. Page 9.

5 Q. Schedule B. The page numbers are
6 right at the bottom.

7 A. Page 9 is correct. I have it here.

8 Q. Thank you. That schedule is entitled
9 Tree Planting Agreement Instructions?

10 A. Correct.

11 Q. And just moving through some of the
12 items described here, because you have identified as a
13 possible concern that perhaps information isn't
14 available as to what is an appropriate microsite for
15 planting, that it may be an information problem as well
16 as enforcement problem?

17 A. Information may be available, Madam,
18 but implementation of these guides, that's correct.

19 Q. And dealing then with the contents of
20 the tree planting agreement instructions for
21 contractors, I would ask you to look first -- the first
22 issue dealt with is quality of planting?

23 A. That's correct.

24 Q. The first second is planting codes
25 and definitions?

1 A. Right.

2 Q. You will see that under code 1 the
3 aspect of seedling vigor is specifically addressed?

4 A. Correct.

5 Q. And instructions are given to the
6 planters as to what they must not do in planting trees
7 so as to negatively affect the vigor of seedlings they
8 are planning; correct?

9 A. Correct.

10 Q. Then the next area dealt with
11 specifically is microsite selection and the agreement
12 stipulates examples of suitable microsites and also
13 examples of unsuitable microsites?

14 A. That's correct.

15 Q. I would direct your attention first
16 to the unsuitable microsites and you will see that they
17 continue over on page 9 starting at subparagraph (a)
18 over to (j) on page 10.

19 A. Yes.

20 Q. Let's take a look at a couple of
21 these. If you look at (c), for example, on page 9 it
22 says:

23 "An unsuitable microsite is a low lying
24 pocket, depression or wet lands produced
25 naturally or by site preparation that is

1 subject to flooding."

2 Stopping there just for a moment. That
3 is an acknowledgment, is it not, in the standard form
4 of instructions provided to tree planters that an
5 undesirable microsite are the kind of pool water areas
6 that you showed in your slide or the flooded areas that
7 you showed in your slides?

8 A. They not necessary be flooded at the
9 same time they plant. It may be flooded next spring,
10 next year.

11 Q. I understand. Of course they can't
12 know that because --

13 A. They should know that. Madam, this
14 is the problem of know-how. A forester must know that
15 these areas will be flooded.

16 Q. All right. And with respect to the
17 basic issue of being on guard for wetland areas that
18 are subject to flooding--

19 A. That's right.

20 Q. --these instructions specifically say
21 these are undesirable microsites and are to be avoided?

22 A. That's right.

23 Q. And then, for example looking at (d),
24 instructions are provided that unsuitable microsites
25 include such things as raised ridges of loose soil or

1 debris; correct?

2 A. Correct.

3 Q. And you would agree that that's an
4 undesirable microsite?

5 A. Yes.

6 Q. And (e), an undesirable microsite
7 includes where tree growth will be obstructed by slash
8 and/or competing vegetation?

9 A. That's correct.

10 Q. And you would agree that's an
11 undesirable microsite?

12 A. Yes.

13 Q. And so on. We can move through a
14 number of these. Can you look at code No. 3 on page
15 10, am I correct that instructions are also provided
16 with respect to planting methods?

17 A. Correct.

18 Q. Instructions are provided
19 specifically as to what one should or should not do
20 with respect to planting depth, seedling firmness,
21 plantation spacing and so on; is that correct?

22 A. That's correct.

23 Q. All right. Could I ask you to go
24 back then to deal with the enforcement side of it.

25 A. What page is that, Madam?

1 Q. Page 3.

2 A. Yes.

3 Q. Measurement and assessment.

4 A. Yes.

5 Q. I would ask you to look at

6 subparagraph (b), if you would and my understanding of

7 the arrangement in place with respect to - using this

8 as an example of the kind of arrangements that are

9 entered into by Industry and tree contractors - is that

10 if the company conducting the tree planting operations

11 does not perform up to defined performance audit

12 standards --

13 Q. Correct. They will be penalized.

14 Q. Penalized or the agreement can be

15 terminated; correct?

16 A. That's right.

17 Q. So what the FMA company does is they

18 actually go out and ensure that the planting effort has

19 been carried out in accordance with a predefined

20 quality control standard?

21 A. That's correct.

22 Q. If it is not met, the contractor is

23 either out of the contract, because the contract can be

24 terminated, or the FMA company can require that the

25 contractor come back at its own expense and improve it

1 until they reach the standard?

2 A. That's correct.

3 Q. Now, would you agree with me -- I
4 should tell you, Mr. Marek, and perhaps you are aware
5 of this, that the Board has seen other quality control
6 standard documents with respect to planting from
7 various companies in the renewal evidence.

8 A. Not only that, they have probably
9 seen the MNR.

10 Q. Indeed.

11 MADAM CHAIR: Also, we have seen on site
12 visits actually tree planting operations and actually
13 quality control inspections.

14 THE WITNESS: Very well.

15 MS. CRONK: Q. And the Board has
16 received evidence on those issues, Mr. Marek, and I
17 wish really to understand the context in which you have
18 given the evidence that you have given concerning this
19 whole issue of planting and microsites.

20 Would it be fair to suggest to you that
21 what your evidence comes to on this issue is this, that
22 there are silvicultural conditions which foresters
23 should be aware when they are carrying out planting
24 efforts?

25 A. You mean site conditions?

1 Q. Yes, I'm sorry. Site conditions of
2 which a forester should be aware when carrying out
3 planting efforts?

4 A. Correct.

5 Q. You agree that quality control
6 measures of the kind reflected in this tree planting
7 contract are appropriate and desirable?

8 A. It says so in these guidelines or
9 what do you -- what's that proper term?

10 Q. Tree planting contract?

11 A. Yes.

12 Q. And you agree that it is desirable
13 those be in place, those standards?

14 A. They are desirable and in general
15 fairly valid, but what I'm missing here again some of
16 these items which I would see improved.

17 Q. What specifically are you referring
18 to?

19 A. Well, I cannot recall seeing, for
20 instance, depth of the planting, depth, how deep you
21 put a tree.

22 Madam, I suppose you realize that you can
23 put tree buried or put in certain strata, so that is
24 not stipulated specifically in some of these
25 guidelines. If it's speculated, sometimes it's very

1 misleading.

2 I cannot criticize this because I cannot
3 recall exactly, but I have seen guidelines which say,
4 for instance, the tree has to be planted in certain
5 depth and if it is deeper you are going to be penalize.

6 I have cases, Madam, two or three
7 consulting cases where the tree planting contractor was
8 penalized considerably for "deep planted trees" and he
9 came to me and he said: Would you look at it, I am
10 losing 3-, 4-, \$5,000 and I am going to can fight that
11 case.

12 And when I realized, Madam Cronk and
13 Madam Chair, that this kind deep of deep planting was
14 specifically stated in a certain condition, these
15 conditions does not comply to it; in other words, I
16 would have probably - if I might say - I would have
17 planted trees probably the same way as the contractor
18 did and obviously contravene some of these regulations
19 of MNR or, in this case, the company too.

20 So there are certain things which perhaps
21 we should look at them and improve our prescription.

22 Q. Again, it will vary from site to site
23 and depth of soil and depth of soil?

24 A. That is exactly the problem, the
25 fantastic variation, and when you put a blanket

1 statement: You must not do this, does it apply for A
2 area B area which may change in a matter of few hundred
3 feet or, as a matter of fact, few feet in some cases.

4 Q. You would agree, however, Mr. Marek,
5 that it is desirable that guidance be provided to tree
6 contractors who are going out in the field to plant
7 trees? They have to have some understanding of where
8 they are to plan and are not to plant?

9 A. Very much so.

10 Q. So the issue in your mind is ensuring
11 that those guidelines that are provided by way of
12 standards are appropriate to the sites that are being
13 planted?

14 A. They should be that way, yes.

15 Q. Yes. And would you acknowledge as
16 well that there is a concerted effort made not only by
17 Industry foresters, but also by government foresters?

18 We are talking about now the FMA areas,
19 that's what you are talking about, there is a concerted
20 effort made by them to ensure that tree planting
21 efforts are carried out as they should be in
22 appropriate microsites on sites? There is a concerted
23 effort?

24 A. Again, there is that "should",
25 "should". It is really done?

1 Q. I am suggesting to you that what is
2 really done is there a concerted effort made to ensure
3 that it is done correctly. They try to make sure that
4 that's happening; do they not?

5 A. Well...

6 Q. Isn't that fair? Don't they go out
7 and conduct their assessments of their tree planters
8 and try to ensure that the efforts are carried out as
9 they should be?

10 A. How come I go after and look at these
11 things and these conditions are not met? Will you
12 explain that to me, Madam.

13 Q. The proposition I am really puttin to
14 you, Mr. Marek, I suppose is that you cannot be a
15 hundred per cent successful in everything and you are
16 going to have microsites where trees are planted where
17 they shouldn't be, but in fairness to the companies,
18 given the evidence that you have given, there is a
19 concentrated effort made to ensure that their tree
20 planting efforts are carried out properly?

21 A. Madam Chair, I hope I will be
22 convinced of this from now on.

23 Q. You are not convinced today?

24 A. No.

25 Q. You don't think they try to ensure

1 that that in fact happens?

2 A. Oh, they do, but is that valid
3 enforcement?

4 Madam, I didn't pick up in my slides dry
5 out trees or areas which are mucked up and trees
6 planted and next year they are gone or dead. I didn't
7 pick up purposely. This is an area of deep concern,
8 where do we really plant, how we do it in order to
9 maintain my investment in the forest and your
10 investment in the forest.

11 Q. And the companies' investment in the
12 regeneration of the land they manage, would you agree
13 with me that it is in their self-interest when they
14 undertake planting to make sure that it is carried out
15 properly so that regeneration is as they plan it?

16 A. It should be.

17 Q. Yes. Are you saying that that does
18 not occur today?

19 A. In many instances I have seen this is
20 not done.

21 Q. What I am suggesting to you is that
22 when you look at the areas with which you are familiar
23 as a whole, that's the exception rather than the rule?
24 It happens, but it is the exception not the rule. Now,
25 isn't that the case?

1 A. I have visited, Madam, very good
2 looking plantations, just randomly I have selected
3 plantation which are not good looking and they have
4 heavy mortality in areas which I have suggested.

5 I feel that perhaps we should deal with
6 the issue more thoroughly and prevent these kind of
7 happenings where the mortality occurs throughout the
8 whole region.

9 Q. It is the exception rather than the
10 rule?

11 A. When you talk about total
12 regeneration effort, when you talk about the total
13 planting program, I would say it's a minor component.

14 Q. Thank you.

15 A. Again, I cannot say if it's 10 per
16 cent or 50 per cent because I was not after here. I
17 randomly examined this from year to year and I say that
18 shouldn't happen because even that hurt you and it hurt
19 me as taxpayers.

20 Q. I don't think you would get any
21 disagreement from other professional foresters about
22 that.

23 A. Thank you. Very much appreciated.

24 Q. I am just trying to put into context
25 the evidence that you have given. I think you have

1 told me that a very small proportion of the total tree
2 planting program would fall -- you can't put a number
3 on it, but you said a small proportion of the total
4 tree planting program would fall into the area that you
5 are concerned about?

6 A. You are putting already small
7 proportion and I don't like that. I think there should
8 be certain proportions varying from site to site.

9 So be more specific without assigning
10 percentages like I did, for instance, on disturbance
11 by logging which I think is perhaps more serious than
12 that. Yes, certain percentage is affected and we
13 should avoid that.

14 Q. That's in the area of the undertaking
15 with which you are familiar?

16 A. No, no, this is part of my study
17 which I have done.

18 Q. That's the area we are talking about,
19 around the Lake Nipigon area that you have done your
20 random sampling on?

21 A. Madam, we have to be -- are we
22 talking about specifically Lake Nipigon area for
23 testimony I gave for the Society?

24 Q. No, we are talking about your total
25 -evidence. I am saying in the total area for which you

1 are familiar that is your experience?

2 A. Okay.

3 Q. Correct?

4 A. Correct.

5 MS. SWENARCHUK: Let's be clear here and
6 let's not let this sit because there is some confusion
7 in terminology.

8 I think Mr. Marek needs to know clearly,
9 are you asking whether that conclusion pertains only to
10 his experience in the Lake Nipigon area or does to it
11 pertain to what he has observed in the totality of the
12 boreal forest that he studied and on which he reported
13 to the Board and for which he has testified to the
14 Board?

15 I think the question clearly -- correct
16 me if I am wrong, Ms. Cronk, but I think in fairness to
17 the witness he deserves to have this put clearly.

18 Is that an observation specifically to
19 the Lake Nipigon area or does it pertain to the whole
20 area he examined and testified to the Board.

21 MADAM CHAIR: Excuse me, Ms. Swenarchuk.
22 The Board's understanding is that Mr. Marek's expertise
23 and all the evidence he has given to the Board is
24 primarily based in the Lake Nipigon/Beardmore, the area
25 we look looking at that at the map. It has to do

1 primarily with black spruce and it has to do with a
2 certain geographical area. There have been situations
3 where you have said this applies to the whole boreal
4 forest, but in most cases I think you have said this
5 applies to a specific area.

6 MS. CRONK: That's correct, Madam Chair

7 MS. SWENARCHUK: Mrs. Koven, with respect
8 to the slides, particularly many of those pertained to
9 planting and those slide were not limited only to the
10 Lake Nipigon area and many were from the Clay Belt area
11 and I think it is fair to clarify the record right now
12 as to what he is referring to here.

13 MS. CRONK: I don't have any trouble in
14 doing that. I thought I had and it is my inadequacy in
15 not putting the questions right.

16 Q. Can I try again, Mr. Marek. In
17 respect of the areas that you have described to the
18 Board involving planting --

19 A. That's correct.

20 Q. All the areas you have described.
21 What I am suggesting to you is that overall looking at
22 the tree planting program in those areas, by and large
23 it is conducted very well and that the kind of
24 inappropriate planting conditions that you have
25 observed are the exception rather than the rule?

1 A. Exception for what area? Across the
2 board?

3 Q. Anything you have observed, in the
4 whole area where you have observed it, it's the
5 exception rather than the rule?

6 You can find it, it's there, but it's not
7 the norm, it is the exception rather than the rule. I
8 thought you told me yes?

9 A. Well, that's why the counsel here
10 intervene and start talking about specific areas.

11 When I -- Madam Chair, when I have made
12 since 1987 the reconnaissance trips and the randomly
13 sampling of the total spectrum -- and too bad we
14 haven't got the maps here which shows you where I was
15 and where I am coming often too back.

16 Q. We do have a map, Mr. Marek. Let's
17 go to it. Could you look at Tab 3, please.

18 MS. SWENARCHUK: Please, Ms. Cronk, I
19 think he is entitled to respond to the question and if
20 you would just give him the time he can do that.

21 You have a map at Tab 3, but that may not
22 be the map of the area that he has in mind.

23 MADAM CHAIR: We have a map of every area
24 in the province, Mr. Marek.

25 THE WITNESS: That has nothing to do with

1 it, unfortunately.

2 MADAM CHAIR: Let's talk about where your
3 tree planting observations apply. Do they apply to the
4 entire area of the undertaking?

5 THE WITNESS: That's right.

6 MADAM CHAIR: Thank you.

7 THE WITNESS: No, pardon me. Undertaking
8 means right down to southern Ontario?

9 MADAM CHAIR: Yes.

10 THE WITNESS: No, it's strictly limited
11 and I will have to show on the maps which areas I have
12 visited, which areas where I examined thoroughly and
13 being examined currently and will be examined in the
14 future, and I think it would be great misunderstanding
15 to pinpoint these problems to Domtar or Abitibi in the
16 vicinity of Lake Nipigon, and this is what's happening.

17 MS. CRONK: Q. Believe me, I wasn't
18 trying to do that.

19 A. No, but you are presenting map which
20 is just vicinity of Lake Nipigon, Madam.

21 Q. Sorry. Would you look at Tab 3. I
22 will see if I can assist you here.

23 A. I see it over here.

24 Q. Look in your own book at Tab 3.

25 A. Is that this black thing?

1 Q. You remember when we started our
2 discussion about the map, there a number of coloured
3 management units?

4 A. Yes. Very much so.

5 Q. In the various slides that you have
6 presented, as I recall the slides, all of the slides--

7 A. That's right.

8 Q. --were from one or another of the
9 management units described in this map?

10 A. No, there were half a dozen slides
11 from Clay Belt, from Iroquois Falls.

12 Q. Yes. Look at the map, sir, it
13 includes part of the Clay Belt.

14 A. Madam, I am faced here with Domtar,
15 Abitibi licence and I went beyond that to the east and
16 I went way beyond in the west.

17 Q. Then let's put it in this context.
18 Based on all of the areas that you have observed--

19 A. Right.

20 Q. --wherever situated in the area of
21 the undertaking--

22 A. That's right.

23 Q. --would it be fair to say that
24 looking at the tree planting program in all of these
25 areas, to the extent that you have observed them, these

1 inappropriate planting conditions that you have
2 described are the exception rather than the rule.

3 Now, can you answer that?

4 A. They are rather exceptions than the
5 rule and by that I'd like to qualify that these areas,
6 these areas to my statement cannot be pinpointed by 10,
7 15, 20, 30 per cent. As you know, the margin is always
8 50/50.

9 I would suggest to the Madam Board that
10 it may vary from area to area, but in general they do
11 exist over the total scope of tree planting projects in
12 the area I have visited and have studied.

13 Q. As the exception rather than the
14 rule? Yes or no?

15 A. Madam, as the exception to what? As
16 the exception of 20 per cent or 10 per cent or 5 per
17 cent? I cannot say that because I didn't sample that,
18 but in my cases --

19 Q. Thank you, that's fine. You didn't
20 sample it, that's fine.

21 Mr. Marek, could I ask you to go to page
22 37, if you would, please, of your witness statement.

23 A. Correct.

24 Q. This is Panel 3 witness statement
25 and, again, still talking in the context of planting.

1 The second is entitled Tree Planting in the Boreal
2 Forest.

3 A. That's not on page 37.

4 Q. No, I know that. Page 36 --

5 A. Oh, yes.

6 Q. On page 37 where the discussion
7 begins it is entitled Tree Planting in the Boreal
8 Forest.

9 A. That's right. I have it.

10 Q. Then we come over to page 37, and in
11 the first full paragraph you have quoted from a
12 publication by Bella, 1978, relating to stocking
13 standards. Do you see that?

14 That's the first full indented paragraph
15 at the top of page 37.

16 A. Bella, 1978, correct.

17 Q. And you are quoting from --

18 A. Bella.

19 Q. You are quoting from Bella, a
20 publication dealing with stocking standards in Alberta?

21 A. Correct. That's right.

22 Q. I just want to again ensure that my
23 understanding of certain facts is correct, Mr. Marek,
24 if you can help me.

25 A. Please.

1 Q. It's my understanding that the
2 Alberta standard; that is, minimum stocking standard,
3 is based on eight by eight meter quadrates?

4 A. That's correct.

5 Q. Ontario's is based on two by two
6 metre quadrates?

7 A. Two by two, that's right.

8 Q. Does that not mean that a hundred per
9 cent stocking in -- a hundred per cent stocked stand in
10 Alberta by Alberta stocking standards will be no more
11 than about 70 per cent stocked in Ontario based on
12 Ontario's standards.

13 A. I don't know exactly what percentage
14 that may be, 72 or something. We were looking at these
15 problems in comparing because there are so many
16 conflict -- there is a big argument ongoing about the
17 effectiveness of these kind of methods.

18 Yes, I agree these standards are somewhat
19 different.

20 Q. My point being that the standards in
21 Ontario are more rigorous?

22 A. Not rigorous enough, Madam.

23 Q. I understand your view on that, but
24 they are more rigorous than the ones in Alberta?

25 A. Yes, that's correct.

1 Q. Thank you. Now, you have also had
2 some observations to offer to the Board regarding the
3 quality of container stock used in planting efforts--

4 A. That is correct.

5 Q. --with which you are familiar and you
6 expressed a number of concerns about that. Could I ask
7 you to go to page 41 again, please.

8 A. Of my...

9 Q. Of your statement of evidence.

10 A. 41, that's correct.

11 Q. And at page 40, you will remember we
12 looked at that earlier, there is a discussion on that
13 page with respect to rutting?

14 A. Right.

15 Q. But on page 41, really starting in
16 the last sentence of the preceding page, you indicate:

17 "The outcome of planting is heavily
18 dependent on the quality of planting
19 stock as well as site preparation."

20 A. That's correct.

21 Q. Then you say "

22 "Container stock is below my personal
23 standards. Spruce bareroot stock is
24 usually satisfactory."

25 A. That is correct.

1 Q. "On some planting projects, the
2 container stock is already flushed out
3 jeopardizing planning success."

4 A. That's correct.

5 Q. All right. I understand you to be
6 saying, and please correct me if I am wrong, that
7 with - first of all, your discussion here is about
8 black spruce seedling stock?

9 A. Only.

10 Q. Yes. And you are saying the bareroot
11 stock in your experience is generally satisfactory, but
12 you are unhappy about the quality of container -- black
13 spruce container stock?

14 A. Not in general. In some areas of the
15 container stock.

16 Q. Thank you.

17 A. There is some container stock which
18 may be all right, but some which I fully disagree with,
19 you know, their production line and the condition they
20 appear in the field for the planters.

21 Q. You weren't suggesting then, I take
22 it, that generally container stock available for black
23 spruce was unsatisfactory, simply that on occasion it
24 was?

25 A. As far as container stock, I have to

1 say that the deficiencies are probably more affecting
2 the later production, say, planting in June or July
3 where you have really impact on the mortality and the
4 area of growth. So this has to be qualified again in
5 certain terms.

6 Q. That's what I am trying to understand
7 because you will appreciate as written, and I
8 understand why, but as written it is quite a
9 generalized statement?

10 A. That's correct.

11 Q. First of all, we know it applies only
12 to black spruce stock. Now I am suggesting to you that
13 you weren't intending to suggest that generally--

14 A. All over the --

15 Q. --container black spruce stock is
16 inadequate, only sometimes?

17 A. Sometimes.

18 Q. Yes, thank you. We could both
19 recount a myriad of examples where black spruce
20 container stock has been planted and planted
21 successfully in numerous areas in the boreal forest?

22 A. Yes, there are cases of that kind.

23 Q. We could also find examples, as we
24 saw earlier today, for example, with respect to the
25 planting efforts carried out on block 2 in the vicinity

1 of 101 and 102 where the stock you told me that you
2 received to plant was not what you would have liked but
3 it got planted?

4 A. Correct. Oh, very much so.

5 Q. In the end it produced stocking
6 results of black spruce of 68 per cent five years after
7 planting?

8 A. Correct.

9 Q. So it would be inappropriate then to
10 conclude that although the condition of the stock may
11 not be ideal, that it will necessary result in
12 mortality and deficient stocking, that might not be the
13 case?

14 A. That's correct.

15 Q. But obviously in the pursuit of the
16 best quality stock --

17 A. Call it excellency, Madam.

18 Q. In the pursuit of excellence in tree
19 planting endeavors we obviously want the best quality
20 stock available, be it bareroot or container?

21 A. That's correct.

22 Q. Am I also correct, Mr. Marek, that
23 generally speaking during the course of your career in
24 the field most of your experience was with bareroot as
25 opposed to container stock that's now coming out of the

1 tree planting program?

2 A. That is true because it was my choice
3 to have rather the transplant vigorous stock for the
4 purpose of my goals and achievements.

5 That's, of course, realized by the time when I dealt
6 with that issue. If you have areas which requires
7 rigid, well developed root system, you have to put it
8 in place, where someplaces you don't have to. That's
9 very site specific.

10 Q. You chose preferentially to use
11 bareroot --

12 A. Because I was trying to get intensive
13 management plantation. On the other hand, I had a
14 horrible experience with tree zero stock where I was
15 putting in this kind of condition and that whole
16 program collapsed on me because I didn't see the
17 performance of these trees as I desired; in other
18 words, the mortality was high, et cetera

19 Q. Perhaps one other matter before the
20 end of the day, Mr. Marek, if we could.

21 On the same page, page 41 at the bottom
22 of the page you are discussing a report prepared in
23 1983 by McComb which was a survey of then post-cut
24 ground condition and then recent cut-over in the Smooth
25 Rock Falls area?

1 A. Correct.

2 Q. And that article forms part of the
3 source material that you have provided the Board?

4 A. Correct.

5 Q. As I understand it, the surveys were
6 conducted in about 1982 and reported upon in '83; is
7 that correct?

8 A. Well, I thought it was 1984.
9 However -- okay, fine. 1983.

10 Q. The report is dated '83?

11 A. That's right.

12 Q. The surveys are from the previous
13 years, as I understand it?

14 A. That is correct.

15 Q. Can we agree, Mr. Marek, when we talk
16 about Smooth Rock Falls we are talking about a
17 management unit formally designated as Smooth Rock
18 Falls in the Clay Belt region?

19 A. That's correct.

20 Q. No longer a management unit in those
21 terms?

22 A. No.

23 Q. Can we also agree that since 1983, at
24 the time of the McComb report, there have been enormous
25 changes in the timber management practices in the Clay

1 Belt relating both to equipment and method of harvest?

2 A. You call it tremendous, I have to...

3 Q. Significant.

4 A. There were some changes done.

5 Q. Significant changes?

6 A. Beneficial. Let's call it some
7 beneficiary results or some improvement has been done.

8 Q. And the practices today in that area
9 are, I suggest, dramatically different than they were
10 at the time of McComb's report; is that not so?

11 A. Not across the board, not overall.

12 Q. Well, for example, just dealing with
13 the equipment aspect of it, and please correct me if I
14 am wrong, as I understand it the managers in that area
15 have gone from the use of chain saws for harvesting and
16 narrow tired skidders--

17 A. That's correct.

18 Q. --for forwarding to high flotation
19 track fellerbunchers, for example?

20 A. Yes, I have seen that and I have
21 witnessed it.

22 Q. Quite a dramatic change in terms of
23 equipment, you would agree?

24 A. Dramatic from what point of view?
25 Perhaps dramatic for production or contracting and so

1 on, but -I sometimes wonder if equal benefits were given
2 to the silvicultural thing.

3 Q. They perform vastly differently;
4 don't they?

5 A. Well, they obviously do not as heavy
6 damage as the previously used equipment, yes.

7 Q. Exactly. And, in fact, on the
8 equipment side of things in that area; that is, the
9 area formally known as the Smooth Rock management unit
10 area, they are now fully mechanized, they are using
11 forwarders equipped with special high flotation tracks
12 on all sites?

13 A. Yes.

14 Q. And that didn't use to be the case?
15 At the time of the McComb report it wasn't the case?

16 A. As a matter of fact, I understand
17 there is some new Finnish equipment coming up which
18 probably going to improve the situation. Yes, I'm
19 aware of these things.

20 Q. As I understand it, the method of
21 harvest has also changed in this respect, alternate
22 strip cut is one of the prescriptions for the area
23 today, didn't use to be then or do you know?

24 A. Well, yes, I'm following what
25 percentage of area is being strip cut and what effect.

1 Q. No, I am just saying that is a
2 method, alternate strip cuts is a method, is a defined
3 prescription today in that part of the boreal forest
4 and it isn't used to be in '83?

5 A. Again, we have to distinguish which
6 harvesting method prescription and silviculture method
7 prescription.

8 Q. I'm talking about alternate strip
9 cutting.

10 A. Again, you have to be very careful.
11 Is that for harvesting purposes or silvicultural
12 purposes?

13 Q. For both.

14 A. Okay.

15 Q. I am saying it it used today, it
16 wasn't then; is that right?

17 A. Well, the strip cut goes way back to
18 1930's, 1940's. I mean, there was a certain percentage
19 always done and research being done like for Vincent
20 township and so I have seen them all.

21 I agree that probably all the pressure is
22 to advance our forest management for more kind of
23 extensive approach where strip cutting will be part of
24 it.

25 Q. At the time of the McComb report -

1 please tell me if you can please and if you can't
2 please indicate - at the time of the McComb report in
3 1983, in this particular part of Clay Belt, alternate
4 strip cutting was not a defined prescription and it is
5 today?

6 A. Not that I know of.

7 Q. It is today?

8 A. Yes.

9 Q. In addition, still dealing with
10 method of harvest, today, as we have seen from
11 discussion, for example, of Mr. Gemmell's case study,
12 that's not the Smooth Rock Falls area, the practice has
13 developed of using logging leaving small patches of
14 wood to protect advanced growth, whereas that was not a
15 regular procedure at the time of McComb's report; is
16 that also correct?

17 A. That's correct, but it doesn't
18 improve water table, Madam.

19 Q. We will leave water table aside for
20 the moment. I am just saying to you in terms of method
21 of harvesting approach there has been quite a change
22 since the McComb report in that respect?

23 A. Positive steps to understanding the
24 problem we used to have.

25 Q. And, in fact, then looking both on

1 the equipment side and on the harvesting method site,
2 there have been considerable changes in that area of
3 the Clay Belt since the time of the McComb report?

4 A. Madam, this considerable again
5 bothers me. When you say considerable, what do you
6 mean?

7 It's really something which impacts the
8 total considerably or is that just kind of, I would
9 say, minimal or optimum thing. I would like to see
10 maximization, as you probably hear quite often from me.

11 Q. Very beneficial changes have been
12 made since the time of Mr. McComb's report?

13 A. Some beneficial changes occurred
14 which companies should be applauded and Ministry should
15 be applauded.

16 Q. Of the kind we have just discussed,
17 the equipment on the harvesting side which was
18 mentioned to you.

19 A. That's right.

20 Q. Thank you very much.

21 MS. CRONK: Madam Chair, Mr. Martel, I
22 had hoped to finish by today. I can tell you that
23 obviously has not happened. I have about an hour left
24 in cross-examination.

25 I can tell you that an area I thought

1 today would take half an hour took considerably longer.
2 I will do everything possible to finish within an hour
3 on Monday morning.

4 MADAM CHAIR: Thank you, Ms. Cronk.

5 Ms. Seaborn, you will be ready to follow?

6 MS. SEABORN: Yes, Madam Chair. I
7 provided to Mr. Pascoe and my friends a list of the
8 exhibits that parties should have with them on Monday
9 for my cross-examination.

10 There are only a couple of exhibits that
11 I think it will be necessary for Mr. Marek to have a
12 look at, and if I could be permitted to speak to Ms.
13 Swenarchuk about that so she can pass that information
14 on to Mr. Marek.

15 I told Ms. Swenarchuk initially that I
16 don't expect Mr. Marek to review all the exhibits on
17 the list. There a number of them I may not have to
18 refer to, but rather that the Board had them with them.

19 THE WITNESS: Madam Chair, could I ask
20 one question?

21 MADAM CHAIR: Yes.

22 THE WITNESS: Are these exhibits
23 available for my Sunday morning or Saturday afternoon
24 examination?

25 MS. SEABORN: The two I want you to look

1 at are both a couple of pages long, Mr. Marek. They
2 are exhibits that were previously filed in the hearing.

3 I will not, Madam Chair, be relying on
4 any further material that Mr. Marek has to prepare for.

5 MADAM CHAIR: So Mr. Marek just has to
6 review a few pages?

7 MS. SEABORN: I beg your pardon?

8 MADAM CHAIR: He just has to review a few
9 pages?

10 MS. SEABORN: Yes. Just because I think
11 it will speed things up, so it is not the first time he
12 looked at the exhibit when I hand it to him on Monday.

13 MADAM CHAIR: We all recongnize that Mr.
14 Marek has marvellous energy, but he has to take a break
15 from this stuff sometimes as well.

16 THE WITNESS: Madam Chair, I was just
17 asking if I had to read books or things which --

18 MADAM CHAIR: It sounds like you can do
19 this on the airplane, I'm not sure.

20 THE WITNESS: I have spent on your
21 documentation, Madam Chair, this morning quite a part
22 of my night and I just couldn't resolve because I
23 couldn't see things and it was pretty difficult to read
24 or memorize it to come back in my mind.

25 That's why I am asking, Madam Chair.

1 MADAM CHAIR: It sounds like Ms.

2 Seaborn's request is a small one.

3 THE WITNESS: That's appreciated.

4 MADAM CHAIR: That won't take up much
5 time.

6 THE WITNESS: That's very much
7 appreciated.

8 MS. CRONK: I am informed that I
9 neglected to ask if you would receive the tree planting
10 contract as an exhibit and assign an exhibit number to
11 it. It is at Tab 27.

12 MADAM CHAIR: Right. That will be
13 Exhibit 1573, and that is a sample Domtar tree planting
14 contract.

15 MS. CRONK: Thank you, Madam Chair.

16 MADAM CHAIR: Is there a date on that or
17 is that current or...

18 MS. CRONK: I am informed that it is
19 undated.

20 MADAM CHAIR: We have other tree planting
21 contracts in exhibits. I don't know if this is already
22 or not.

23 MS. CRONK: It is not.

24 MADAM CHAIR: All right.

25 MS. CRONK: I should point out, however,

1 that it is apparent that its use was at least 1988 and
2 thereafter because that's what the first line on the
3 top says.

4 MADAM CHAIR: Thank you.

5 MS. CRONK: Thank you very much.

6 ---EXHIBIT NO. 1573: Sample of a Domtar tree planting
7 contract.

8 MADAM CHAIR: Thank you and we will be
9 back Monday morning at ten o'clock.

10
11 ---Whereupon the hearing was adjourned at 4:05 p.m., to
12 be reconvened Monday, November, 19, 1990 commencing
13 10:00 a.m.
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